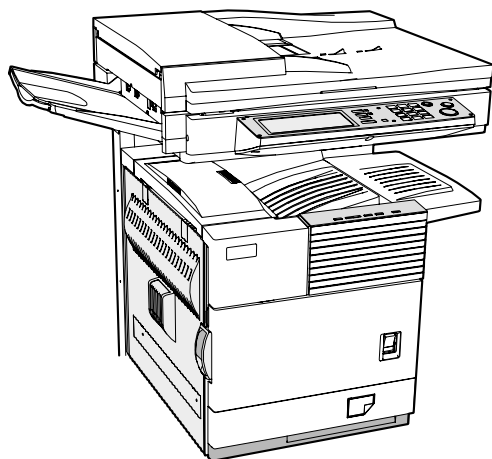


SHARP SERVICE MANUAL

CODE : 00ZARM350UA1E



LASER PRINTER

AR-M350U/M450U MODEL AR-M350N/M450N

OPTIONS AR-P14

[1] INTRODUCTION

The AR-M350U/M450U and AR-M350N/M450N are minor change models based on the AR-M350/M450.

This service manual only provides information on these minor changes.

In addition to this service manual, the documents listed below are required to properly maintain these machines.

•AR-M350/M450	Service Manual : 00ZARM350/A1E	Parts Guide : 00ZARM450/P1E	Circuit Diagram : 00ZARM350/C1/
•AR-P350/P450	Service Manual : 00ZARP350/A2E	Parts Guide : 00ZAR350LPP1/	Circuit Diagram : 00ZARP350/C1/
•AR-NC5J	Service Manual : 00ZARNC5J/A1E		


Note: Depending on the option, additional service documentation may be required.

[2] LIST OF DIFFERENCES FROM AR-M350/M450

A.Product composition

	Model Name	Printer Option Model	NIC Standard Model	Note
Base Engine		AR-M350U AR-M450U	AR-M350N AR-M450N	
Print Speed		35ppm 45ppm	35ppm 45ppm	
Multi Function Controller	AR-M11	Not Available	Standard	
Multi Function Controller(for U-Model)	Not Available	Standard	Not Available	Not registered as a product
Print Server Card	AR-NC5J	Not Available	Standard	
Printer Extension Kit	AR-P14	Option	Not Available	*1

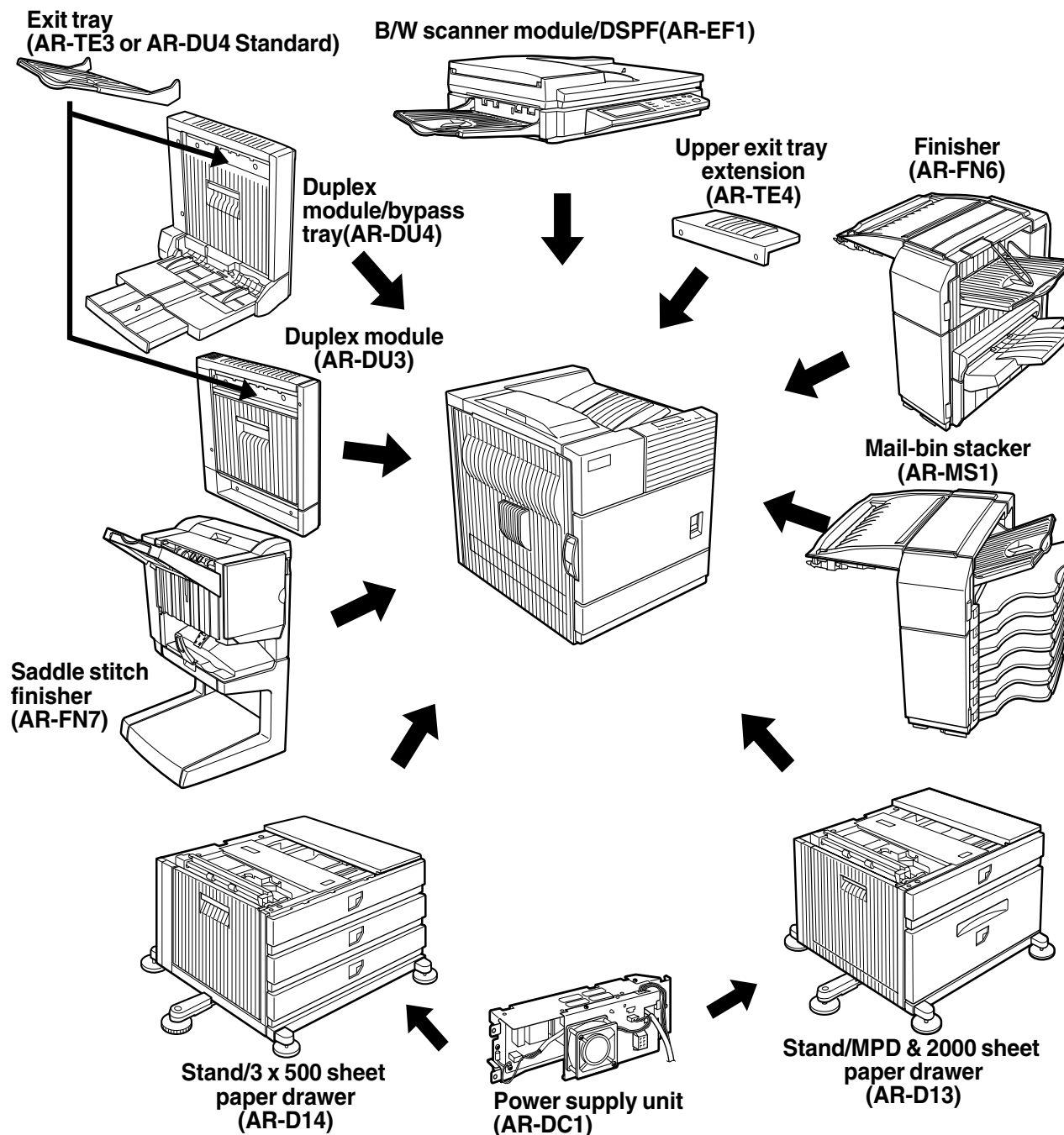
*1: Installation of the AR-P14 on the AR-M350U/M450U will provide similar functionality to that of the AR-M350/M450.

Parts marked with “” are important for maintaining the safety of the set.

Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

[3] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Options must be ordered separately.)	Remarks
MFP model (35ppm)	AR-M350	• B/W Scanner module/DSPF (AR-EF1)	
MFP model (45ppm)	AR-M450	• Scanner Rack (AR-RK1)	
MFP model (35ppm)	AR-M350U	• Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14)	
MFP model (45ppm) (Without network printer function)	AR-M450U	• Power supply unit (AR-DC1)	
MFP model (35ppm) (With NIC card (standard))	AR-M350N		
MFP model (45ppm)	AR-M450N		

3. List of combination of peripheral devices

A.AR-M350U/M450U

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

		B													
		B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card
A	Related for scanner feature														
	B/W scanner module/DSPF	AR-EF1	—	○	○ ^{*1}									○	
	Scanner rack	AR-RK1	○	—	○ ^{*1}									○	
	Related for paper feed unit														
	Stand/3 x 500 sheet paper drawer	AR-D14		—	×										○
	Stand/MPD & 2000 sheet paper drawer	AR-D13		×	—										○
	Duplex module/bypass tray	AR-DU4		○ ^{*1}	—	×						×			○ ^{*2}
	Duplex module	AR-DU3		○ ^{*1}	—										○ ^{*2}
	Output units														
	Saddle stitch finisher	AR-FN7		○ ^{*1}	×	○	—	×		×	×				○
	Finisher	AR-FN6		○ ^{*1}			×	—	×		×	×			○
	Mail-bin stacker	AR-MS1		○ ^{*1}			×	—		×					○
	Exit tray ^{*4}	AR-TE3			○ ^{*1}	×	×	×	—		×				
	Upper exit tray extension	AR-TE4					×	×		—					
	Punch unit	AR-PN1		○ ^{*1}	×	○	○	×		×	—				○
	Related for extension of functions and others														
	PS3 expansion kit	AR-PK1												—	
	Network scanner expansion kit	AR-NS2	○	○	○ ^{*1}									○	—
	Facsimile expansion kit	AR-FX5	○	○	○ ^{*1}										—
	Fax memory (8 MB)	AR-MM9	○	○	○ ^{*1}									○	—
	Power supply unit	AR-DC1			○ ^{*1}										—
	Hard disk drive	AR-HD3													—
	Multi-function controller board ^{*5}	AR-M11	○	○	○ ^{*1}									—	
	Print server card ^{*6}	AR-NC5J												—	○ ^{*1}
	Network printer kit	AR-P14												○	—

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

× = Cannot be installed together.

^{*3} = Standard

^{*4} = AR-DU4 Standard

^{*5} = Attachment of the AR-P14 provides the similar functions.

^{*6} = Not Available

B.AR-M350N/M450N

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

</

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

*3 = Standard

*4 = AR-DU4 Standard

*6 = Cannot be attached.

[4] SPECIFICATIONS

1. Basic Specification

A. Base Engine (AR-M350U/M350N/M450U/M450N)

(1) Form

AR-M350U/M350N/M450U/M450N	Console type
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(2) Engine speed

Paper size	AR-M350U/N	AR-M450U/N
A4, 8.5" x 11"	35ppm	45ppm
A5R/5.5" x 8.5"R	35ppm	45ppm
B5	35ppm	45ppm
B4/8.5" x 14	20ppm	22ppm
A3/11" x 17"	17ppm	20ppm

(3) Engine composition

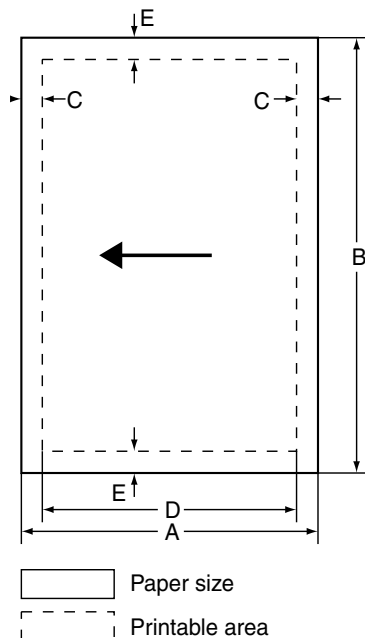
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Counter blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	less than 80 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system	200V system
	100-127V	220-240V
Frequency	50/60Hz	50/60Hz

(8) Power consumption

	AR-M350U/N	AR-M450U/N
Max. Power consump.	1440W	1440W

(9) Energy Star benchmark

	AR-M350U/N	AR-M450U/N
Low power mode	40W	75W
Transition time to Low power mode	60min	60min

(10) Noise

	AR-M350U/N	AR-M450U/N
At working	less than 6.8B	less than 6.8B
At waiting mode	less than 5.0B	less than 5.0B

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions (WxDxH)	428x552x469 (Only main unit) (mm) 16.9"x21.7"x18.5"
Occupied space dimensions (WxD)	963x685 (mm) *1 25.7"x22.3"
Weight	AR-M350U/M450U:Approx.38.9kg (Only main unit) Approx.99kg *1 AR-M350N/M450N:Approx.39.9kg (Only main unit) Approx.100kg *1

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m ²)	
Media available for paper feeding	Plain paper 60 - 105g/m ² , 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/demounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m ² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11" R, 5.5" x 8.5" R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m ² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m ² / 16 ~ 34lbs Index paper : 176g/m ² / 47lbs Cover paper : 205g/m ² / 54 ~ 55lbs Transparency film
Remaining paper detection	Not provided
Exit tray full detection	Provided

2. Specific Function

A. Printer Function

(1) Platform

IBM PC/AT (Include compatible machine)
Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(2) Support OS

Custom PS	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
Custom PCL5e/6(XL)	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
SPDL	Windows 95/98/Me/XP
	Windows NT 4.0
	Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(3) PDL emulation

PCL6, PCL5e compatible, PostScript Level 2, PostScript 3 compatible (PS3 expansion kit is required.)
--

(4) Print Function

a. General

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	No	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

b. Paper input

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

c. Paper output

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

d. Graphic

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

e. Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

f. Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .

* 2 Functions when peripheral devices are installed.

* 3 Not supported in the Windows NT 4.0 environment.

* 4 2/4/6/9/16 is supported in the Windows 2000 environment.

* 5 Only one size is supported in the Windows 2000 environment.

* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.

* 7 This function is limited for PPD.

* 8 PCL6 only

(5) Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PCL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

B. Expanded RAM

Installation of an expanded RAM will avoid the following status.

- 1) Time out error reduction
- 2) Spool time reduction
- 3) Avoidance of VM error / memory full

Use commercially available RAM with the following specifications.

Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

<Specification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

<Operation-assured Memory> (As of March / 2001)

Manufacture	Capacity	Model name	RAM CHIP name	Note
Kingston Technology	128MB	KVR133X64C3/ 128	HYB39S64800BT -7.5	
	128MB	KVR133X64C3 -128	D456821G-A75 -9JF	
	256MB	KVR133X64C3 -256	HY57V28820AT-H	
Viking Compornents	64MB	VIK8641CL2	μPD456841G5 -A80-9JF	
	64MB	VIK8641CL2	D456841G5-A80 -9JF	
	128MB	VIK6642CL2	TC59SM708FT-80	
	128MB	VIK6642CL2	D4564841G5-A80 -9JF	
	256MB	VIK2642CL2	TC59SM708FT-80	
Memory Card Technology	64MB	DM864VS65804X -7G	GM72V66841XT75	
	128MB	DM1665VS65804 X-7G	HY57V64820HG	

C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

(1) Scanner function

Scanner mode	Scan to E-mail (Internet FAX) Scan to Server (Client PC)
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(2) Support System

Embedded server	SMTP server FTP server
Protocol	TCP/IP

(3) Support Image

Format	TIFF, PDF, TIFF-F * Selectable for each page
Compression method	Uncompressed, G3(1-dimension) *1, G4 *2 *1 G3 (1-dimension) = MH (Modified Huffman) *2 G4 = MMR (Modified MR)

(4) Transmission Mode

DSPF/OC transmission switching	Available (Switching during the reading is not feasible)
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(5) Image Process

Half tone reproduction	Equivalent to 256 levels
Exposure adjustment	Light / Auto / Dark
Quality selection	Half-tone ON/OFF
Resolution*	Normal (200x200dpi) Fine (300x300dpi) Super fine (400x400dpi) Ultra fine (600x600dpi) Varies with the file type/transmission method

(6) Original Memory

Standard	Commonly use ERDH area of memory.
Memory expansion	Special : As per ERDH memory

(7) Specified Destination

Specified destination	Specifying by one-touch or group
One-touch*	Max. 500 destinations (in conjunction with the one-touch dial of FAX) Max. 100 destinations can be registered for FTP and Desktop.
Group*	To be registered in one-touch
Program	Available

(8) Specified Multiple Destinations

Specified destination	Specifying by one-touch or group
No. of registration	Max. 300 items (in conjunction with those of FAX)
Sequential broadcasting	Available (E-mail only. It is not available for FTP/Desktop.)
Simultaneous FAX transmission	Available (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan)

O : Available

(9) Functions

Transmitting functions	Rotating transmission	Available (to be matched with FAX specification)
	Long length original transmission	Not Available
	Verification stamp function	Option
Report/list functions	Transmit/receive record	Available
	Transmit/receive result	Available
	Address/phone directory list	Available
	Group list	Available
	ID/sender list	Available
	Program list	Available

D. Copy function

(1) Copy Speed

	AR-M350U/N			AR-M450U/N		
	Actual	Reduction	Enlargement	Actual	Reduction	Enlargement
A4, 8.5"x11"	35	35	35	45	45	45
A4R, 8.5"x11"R	25	25	25	30	30	30
A5R, 5.5"x8.5"R, Invoice-R	35	35	35	45	45	45
B5	35	35	35	45	45	45
B5R, Executive-R	25	25	25	30	30	30
B4, 8.5"x14"	20	20	20	22	22	22
A3, 11"x17"	17	17	17	20	20	20
Extra, Envelope	17	17	17	20	20	20
Japan P/C	In case of printing on post card, engine speed can vary with system configuration, because next paper is fed after machine completely output previous page.					

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

(2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

	AR-M350U/N	AR-M450U/N
Document glass *1	Less than 5.3 seconds	Less than 4.6 seconds
DSPF	Less than 6.0 seconds	Less than 5.3 seconds

*1 During OC/high-speed mode

(3) Job Speed

	AR-M350U/N	AR-M450U/N
S → S *1	33 cpm (94%)	42 cpm (93%)
S → D *2	32 cpm (91%)	40 cpm (88%)
D → D *3	32 cpm (91%)	40 cpm (88%)

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets

*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets

*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

(4) Continuous Copy

Max. multiple number	999 pages
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(5) Copy Ratio

Copy ratio	AB series : 25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400% Inch series : 25%, 64%, 77%, 100%, 121%, 129%, 400%
Zoom	25 - 400% 25 - 200% (Copy from DSPF)
Independent scaling	Not provided

(6) Exposure/Copy Quality Process

Exposure mode	Binary: Text(auto/manual), Text/photo, Photo 256 levels: Not provided
Manual steps	9 steps
Smoothing	Standard
Toner save mode	Standard

(7) Copy Function

Function	APS	Standard Function
	AMS	Standard Function
	Paper type select	Standard Function (By type setting)
	Auto tray switching	Standard Function
	Rotation copy	Standard Function
	Electronic sort	Standard Function
	Rotation sort	Not provided
	Reserved copy	Standard Function
	Prior tray setting	Not provided
	Recall/register of program	Standard Function
	Proof copy	Not provided
	Preheat function	Standard Function (To be set up by key operator)
	Auto power shut-off function	Standard Function (To be set up by the key operator program)
	Account control	Standard Function (100 accounts)
	Communication support (RIC)	Standard Function
	Card counter support	Only provided the connector
	Coin vendor support	Only provided the connector
Special function	Margin shift	Standard Function
	Edge erase / Center erase	Standard Function
	Dual page copying	Standard Function
	Covers	Not provided
	Transparency insert	Not provided
	Centering	Not provided
	Multi shot (N in 1)	Standard Function (2 in 1 / 4 in 1)
	Pamphlet copy	Standard Function
	2-sided copy orientation change	Standard Function
	Large capacity original mode	0 (Max. 140 pages)
	B/W reverse	Not provided
	Shading	Not provided
	Mirror image	Not provided
	Repeat	Not provided
	Date stamp	Not provided
	Stamp	Not provided
	Page stamp	Not provided
	Zaurus print	Not provided

[5] CONSUMABLE PARTS

1. Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 and the AR-P350/P450.

A. USA

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)	27K	AR-450NT (*1 AR-450NT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450ND	
3	Drum	Drum	x1 50K	AR-450DR	
4	50K maintenance kit	Cleaner blade Drum separation pawl Screen grid Toner reception seal Side malt F Side malt R Charging plate	x1 x4 x1 x1 x1 x1 x1	50K AR-450KC1	
5	100K maintenance kit	Transfer roller Discharging plate Paper dust removing unit DV blade DV side seal F DV side seal R	x1 x1 x1 x1 x1 x1	100K AR-450KA1	
6	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper)	x1 x4	200K AR-450UH	
7	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	x1 x2	200K AR-450LH	
8	Cleaner blade	Cleaner blade	x10 50K(x10)	AR-450CB	AR-450CB=(AR-450BL)x10
9	Cleaning roller	Cleaning roller Bearing	x10 x20	200K(x10) AR-450CR	AR-450CR=(AR-450RC)x10
10	Staple cartridge	Staple cartridge	x3 3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
11	Staple cartridge	Staple cartridge	x3 5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA Government

Note1: Print on Master/individual carton: Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

B. Europe

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)	27K	AR-450T	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450DV	
3	Drum	Drum	x1 50K	AR-450DM	
4	50K PM kit	Cleaner blade Drum separation pawl Screen grid Toner reception seal Side malt F Side malt R Charging plate	x1 x4 x1 x1 x1 x1 x1	50K AR-450KC	
5	100K PM kit	Transfer roller Discharging plate Paper dust removing unit DV blade DV side seal F DV side seal R	x1 x1 x1 x1 x1 x1	100K AR-450KA	
6	200K PM kit	Upper heat roller Lower heat roller Fusing separation pawl (Upper) Fusing separation pawl (Lower) Cleaning roller Bearing	x1 x1 x4 x2 x1 x2	200K AR-450KB	
7	Staple cartridge	Staple cartridge	x3 3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
8	Staple cartridge	Staple cartridge	x3 5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton: 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

2. Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

- 1 Number
For this model, this digit is 2.
- 2 Alphabet
Indicates the model conformity code. T for this model.
- 3 Number
Indicates the end digit of the production year.
- 4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
- 5/6 Number
Indicates the production day on the month.
- 7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
- 8/9 Number
Indicates the day of the month of packing.
- 10 Alphabet
Indicates the production factory. "A" for Nara Plant.

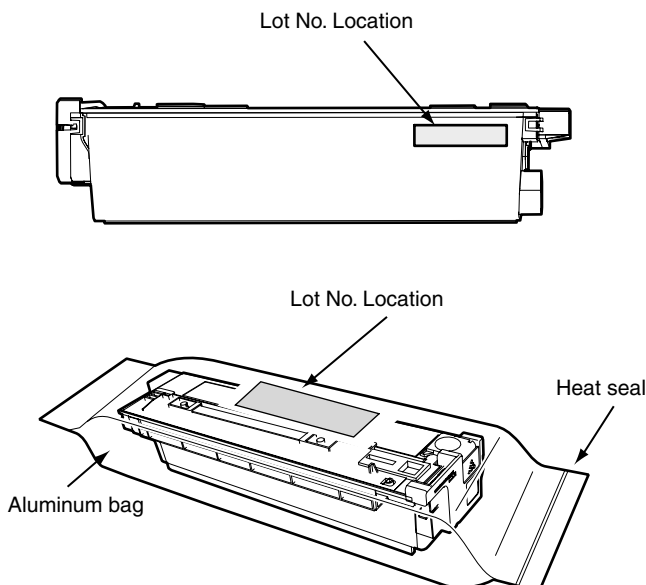
B. Toner cartridge

The lot number is composed of 7 digits, and each digit indicates as following.

The lot number shall be printed in the position shown below.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

- 1 Version number (A - sequentially revised)
- 2 Numeral figure
Indicates the end digit of the production year.
- 3 Alphabet
Indicates the production factory. (B for SOCC)
- 4 Destination code
- 5,6 Numeral figures
Indicates the production day.
- 7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.



C. Developer

The lot number is composed of 8 digit, and each digit indicates as following.

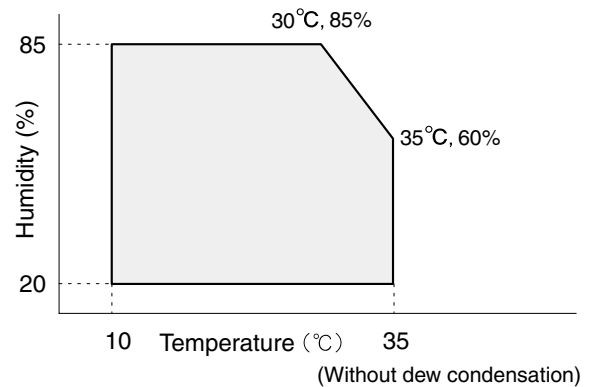
The lot number shall be printed on the bag.

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

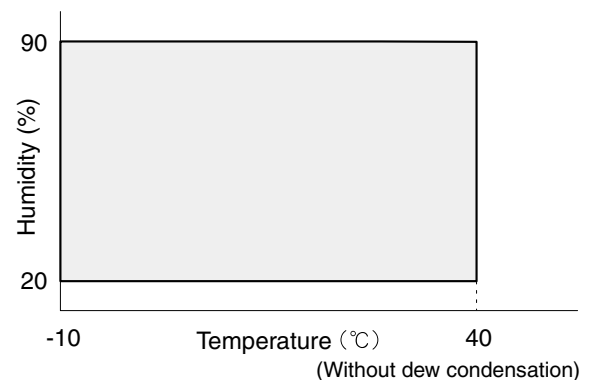
- 1 Alphabet
Indicates the production factory.
- 2 Figure
Indicates the production year.
- 3/4 Figure
Indicates the production month.
- 5/6 Figure
Indicates the production day.
- 7 Hyphenation
- 8 Figure
Indicates the production lot.

3. Environmental conditions

A. Operating conditions



B. Storage conditions



[6] UNPACKING AND INSTALLATION

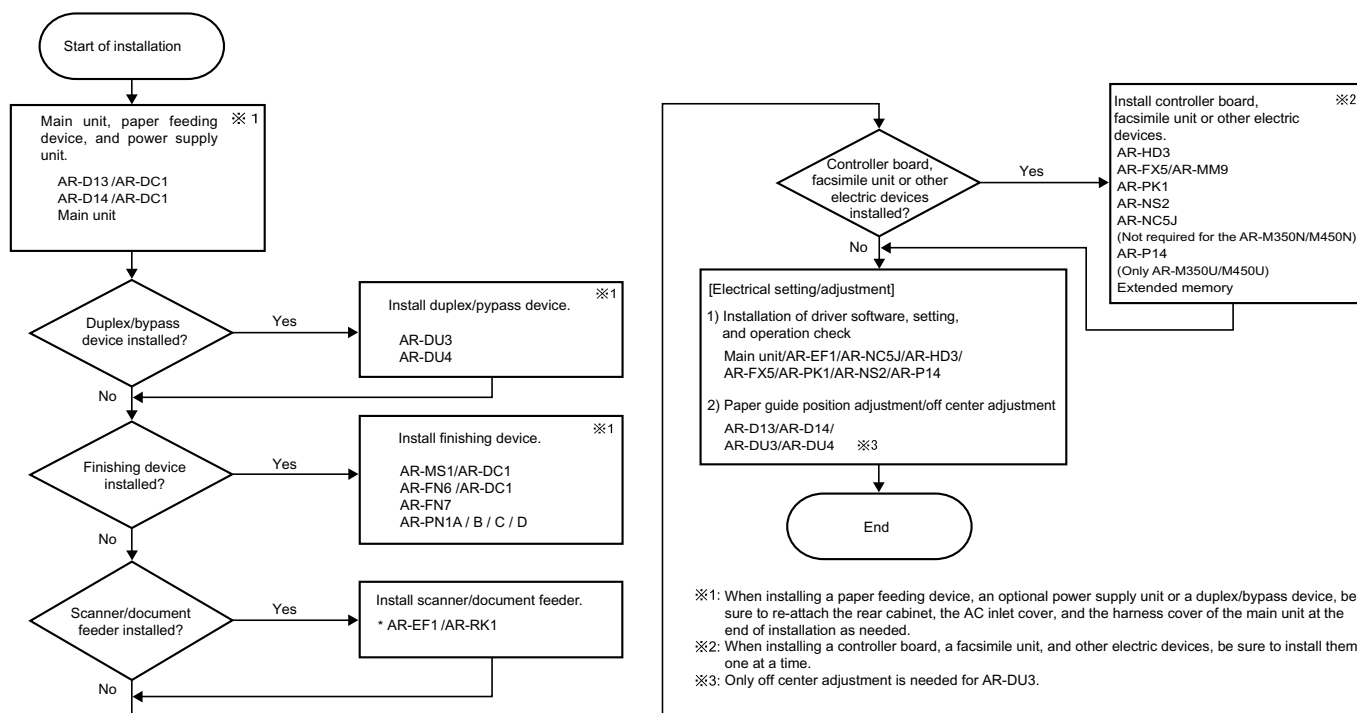
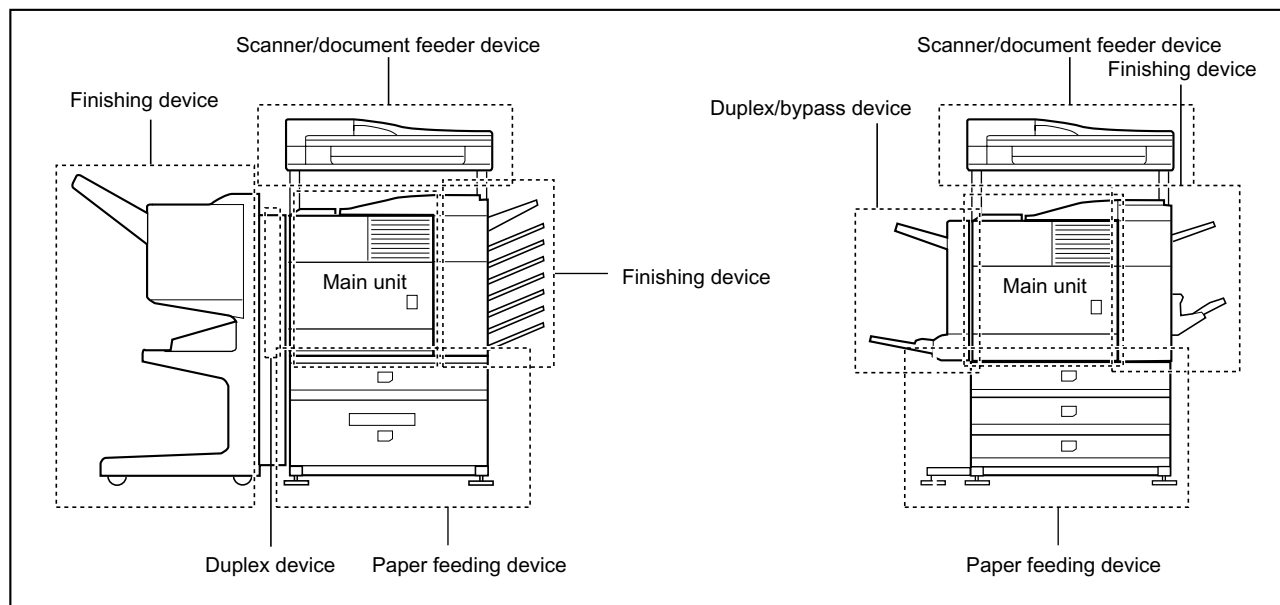
1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.

Some peripheral devices may have been installed as standard devices depending on the main unit model.

Part of descriptions and illustrations may be different.

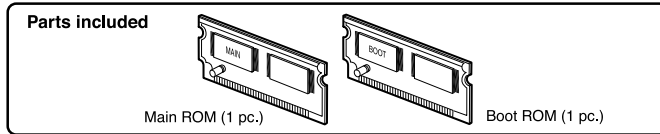


* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

2. AR-P14 installing procedure

<Before installation>

- * This installation procedure is provided for use with the AR-M350U/ M450U series.
- * To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



- * To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information.

Keep the above information for future reference.

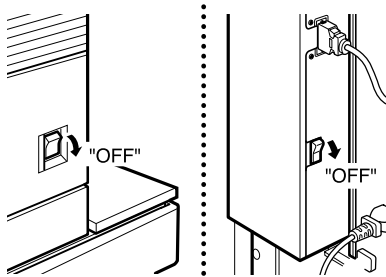
1) Mount the printer expansion kit ROMs to the control PWB.

<1>Turn off the main switch of the main unit of the printer

Turn the main switch located on the front side of the main unit to the "OFF" position.

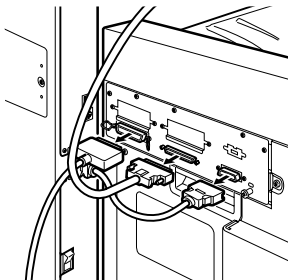
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.

Then remove the power plug from the outlet.



<2>Remove the cables connected to the control PWB unit.

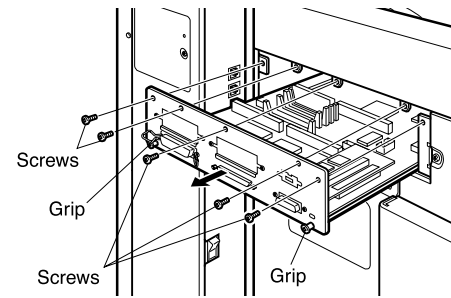
Remove all the cables connected to the control PWB unit of the main unit of the printer.



<3>Remove the control PWB unit.

Remove the five screws that fix the control PWB unit to the main unit of the printer.

Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.

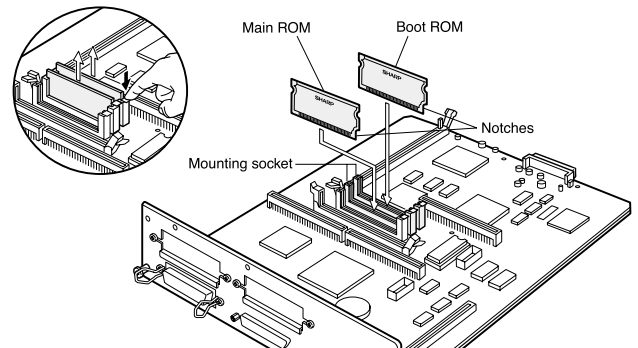


<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.

Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.

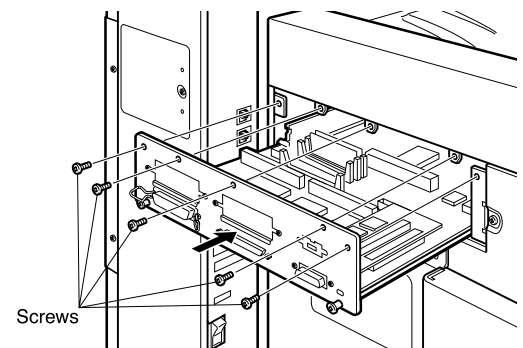
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.

When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.



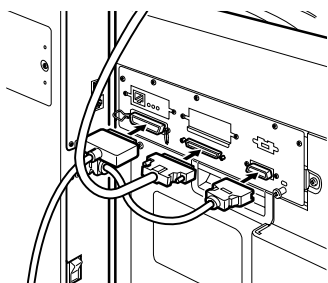
<5>Re-attach the control PWB.

Attach the control PWB to the main unit of the printer and fix it using five screws.



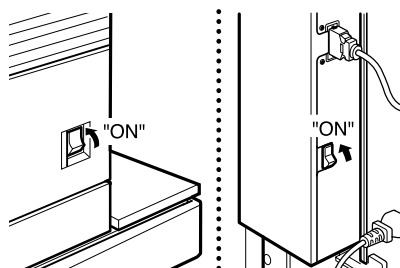
<6> Connect the cables to the control PWB.

Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



If another peripheral device must be installed, carry out the following steps at the end of the installation work.

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.



3) Prepare to enable the printer expansion function.

To enable the printer expansion function, use the keys on the operation panel to enter the product key.

For entry of the product key, see the key operator's guide of the operation manual for the main unit.

Carry out the network setting for the Print Server Card.

Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

In addition to the network setting for this machine, to use the machine in the network environment:

According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.

For installation in the server computer and network setting, see the operation manual supplied with the main unit.

This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.

When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.

(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

[7] MAINTENANCE

1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

2. Maintenance System Table

The maintenance system table is the same as that of the AR-M350/M450.

A. Scanner / DSPF

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Unit name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Optical section	Mirror/Lens/Reflector/Sensors		○	○	○	○	○	○	○	○	○	
	Table glass/OC		○	○	○	○	○	○	○	○	○	
	White reference glass		○	○	○	○	○	○	○	○	○	
	Rails			☆	☆	☆	☆	☆	☆	☆	☆	
	Drive belt/Drive wire/Pulley			×	×	×	×	×	×	×	×	
DSPF	Paper feed section	Take-up roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Separation pad	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Paper feed roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
	Transport section	PS roller	○	○	○	○	○	○	○	○	○	
		Exposure section (Dust-proof glass)	○	○	○	○	○	○	○	○	○	
	Paper exit section	Paper feed roller SPF	○	○	○	○	○	○	○	○	○	
	Other	Sensors			○		○		○		○	For cleaning, blow air.
	Finish stamp section [Option] (Japan only)	Stamp solenoid									▲	
		Stamp individual part	×	×	×	×	×	×	×	×	×	User replacement at 10K or 1 year.

Note 2: Replacement reference: Same as above or 2 years.

B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Unit name	Part name	When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Drum peripheral	Drum		▲	▲	▲	▲	▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	▲	▲	▲	▲	
	Transfer roller	×	×	▲	×	▲	×	▲	×	▲	
	Discharge plate	×	×	▲	×	▲	×	▲	×	▲	
	TR bearing (F/R)			×		×		×		▲	
	Transfer roller collar			×		×		×		▲	
	After-transfer star ring			×		×		×		×	
	TR gear	×	×	×	×	▲	×	×	×	▲	
	Screen grid	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	▲	▲	▲	▲	
	Charger case (M/C)		○	○	○	○	○	○	○	○	
	Charging plate (saw teeth)	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
Developing section	Developer		×	▲	×	▲	×	▲	×	▲	Supplied when installing
	DV blade		×	▲	×	▲	×	▲	×	▲	
	DSD collar		○	○	○	○	○	○	○	○	
	DV side seal F		×	▲	×	▲	×	▲	×	▲	
	DV side seal R		×	▲	×	▲	×	▲	×	▲	
	Toner cartridge										Attached when installing./ EX Japan: 814g, user replacement for every 27K.
Fusing section	Upper heat roller		○	○	○	▲	○	○	○	▲	
	Lower heat roller		○	○	○	▲	○	○	○	▲	
	Upper separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Lower separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Thermistor		○	×	○	×	○	×	○	×	Clean and remove paper dust.
	Upper heat roller gear		×	×	×	▲	×	×	×	▲	
	Paper guides	○	○	○	○	○	○	○	○	○	
	Gears		☆	☆	☆	☆	☆	☆	☆	☆	
	Cleaning roller		×	×	×	▲	×	×	×	▲	
	CL roller collar					▲				▲	
Filters	Ozone filter			▲		▲		▲		▲	
Paper feed section	Paper feed roller	○	○	×	○	×	○	×	○	×	Note 1
	Torque limiter	×		×		×		×		×	Note 1
Transport section	PS follower roller	○	○	○	○	○	○	○	○	○	
Paper exit reverse section	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
	Paper dust remover		×	▲	×	▲	×	▲	×	▲	
Drive section	Specified position	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Belts							×			
Image quality		×	×	×	×	×	×	×	×	×	
Other	Sensors			×		×		×		×	

Note 1: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Torque limiter section: 80K or 2 years

C. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Option name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Separation pad	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport roller	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Finisher	Transport section	Transport rollers	○		○		○		○		○	
		De-curler roller	(○) ×	×	○	×	○	×	○	×	○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple un											Replace UN at 100K staple.
	Staple cartridge											User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Saddle finisher	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple UN											Replace UN at 100K staple (including the staple UN and the holder section).
	Staple cartridge											User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

[8] SIMULATION

For the simulation, the following items have been changed.

22-10

Purpose	Adjustment, setup, operation data output, check (display)
Function (Content)	Used to check the system configuration (option, internal hardware).
Section	
Item	Spec
Operation/Procedure	The machine composition below is displayed.

```

SIMULATION 22-10
SYSTEM INFORMATION.
MACHINE: *****
SPF: ***** XXXXXXXXXXXX
FINISHER : ***** MAIL BIN : ***** PUNCH : *****
DESK/LCC : ***** ADU : ***** XXXXXXXXXXXX
PROCESS TYPE : *
SYSTEM MEMORY: **MB      HDD: **MB  ICU F *****
NIC : ***** NSCN : ***** PS3 : *****
FAX: ***** FAX MEMORY : **MB  HAND SET: *****
STAMP : *****

```

<List of display value>

MACHINE	Model codes
SPF	NONE/ (Model code)
FINISHER	NONE/ (Model code)
MAIL BIN	NONE/ (Model code)
PUNCH	NONE/ (Model code)
DESK/LCC	NONE/ (Model code)
ADU	NONE/ (Model code)
PROCESS TYPE	Process control spec (1, 2: AR machine 3: DM machine)
SYSTEM MEMORY	Memory capacity (MB)
HDD	Hard disk capacity (MB)
ICU	PRINTER/MFP
NIC	NONE/ (Model code)
NSCN	NONE/ (Network scanner)
PS3	NONE/ (PS3 expansion kit)
FAX	NONE/ (Model code)
FAX MEMORY	FAX expansion memory capacity (MB)
HAND SET	NONE/ (Model code)
STAMP	Finisher stamp NONE/ (Model code)

<List of machine model codes>

Item	Display	Content
MACHINE	AR-P350/350LP	
	AR-P450/450LP	
	AR-M350/350M	(Include the N model)
	AR-M450/450M	(Include the N model)
	AR-310M	
	AR-M350U	
	AR-M450U	
	AR-310S/310F	
	AR-350S/350F	
	AR-450S/450F	
SPF	-	Document feed unit not installed
	AR-EF2	Document feed unit (SPF) installed
	AR-EF1	Duplex document feed unit installed
FINISHER	-	After-work unit not installed
	AR-FN6	Built-in finisher installed
	AR-FN7	Console finisher installed
MAIL BIN	-	Mail bin not installed
	AR-MS1	Mail bin installed
Punch unit	-	Punch unit not installed
	AR-PN1A	Punch unit 2 holes
	AR-PN1B	Punch unit 3 holes
	AR-PN1C	Punch unit 4 holes
	AR-PN1D	Punch unit 4 holes wide hole
ADU	-	Duplex module not installed
	AR-DU3	Duplex module installed
	AR-DU4	Duplex module + manual feed unit installed
DESK	-	Paper feed desk not installed
	AR-MU1	Multi-purpose tray installed
	AR-D14/D15	Paper feed desk installed
	AR-D13	Tandem desk installed
ICU	PRINTER	Printer board
	AR-M11	MFP board
	AR-M12 *	MFP board (U model)
	AR-M13 *	MFP board (S model)
MEMORY	0MB	No expansion memory
	***MB	Expansion memory ***MB
HD	0MB	Hard disk not installed
	****MB	Hard disk installed (AR-HD3)
NIC	-	NIC not installed
	AR-NC5J	NIC installed
PS3 expansion kit	-	PS3 expansion kit not installed
	AR-PK1	PS3 expansion kit installed
FAX	-	FAX expansion kit installed
	AR-FX5	FAX expansion kit not installed
Network scanner	-	Network expansion kit not installed
	AR-NS2F	Network expansion kit installed
Expansion memory	-	Expansion memory for FAX not installed
	AR-MM9	Expansion memory for FAX 8MB (AR-MM9) installed
Handset	-	handset not installed
	AR-HN5	Handset installed
Finish stamp	-	Finish stamp unit not installed
	AR-SU1	Finish stamp unit installed

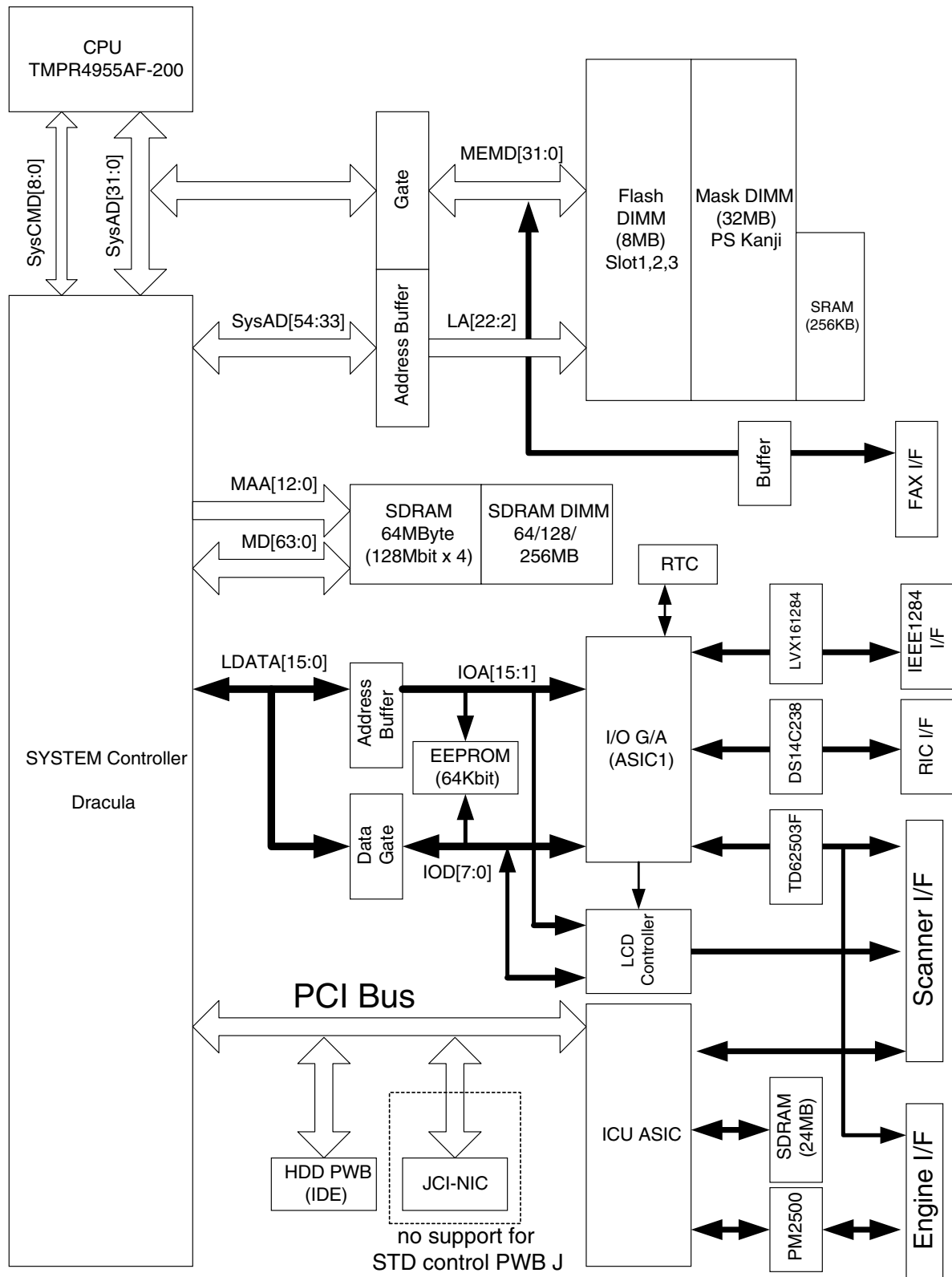
*: Not registered as a product.

[9] CIRCUIT DIAGRAM

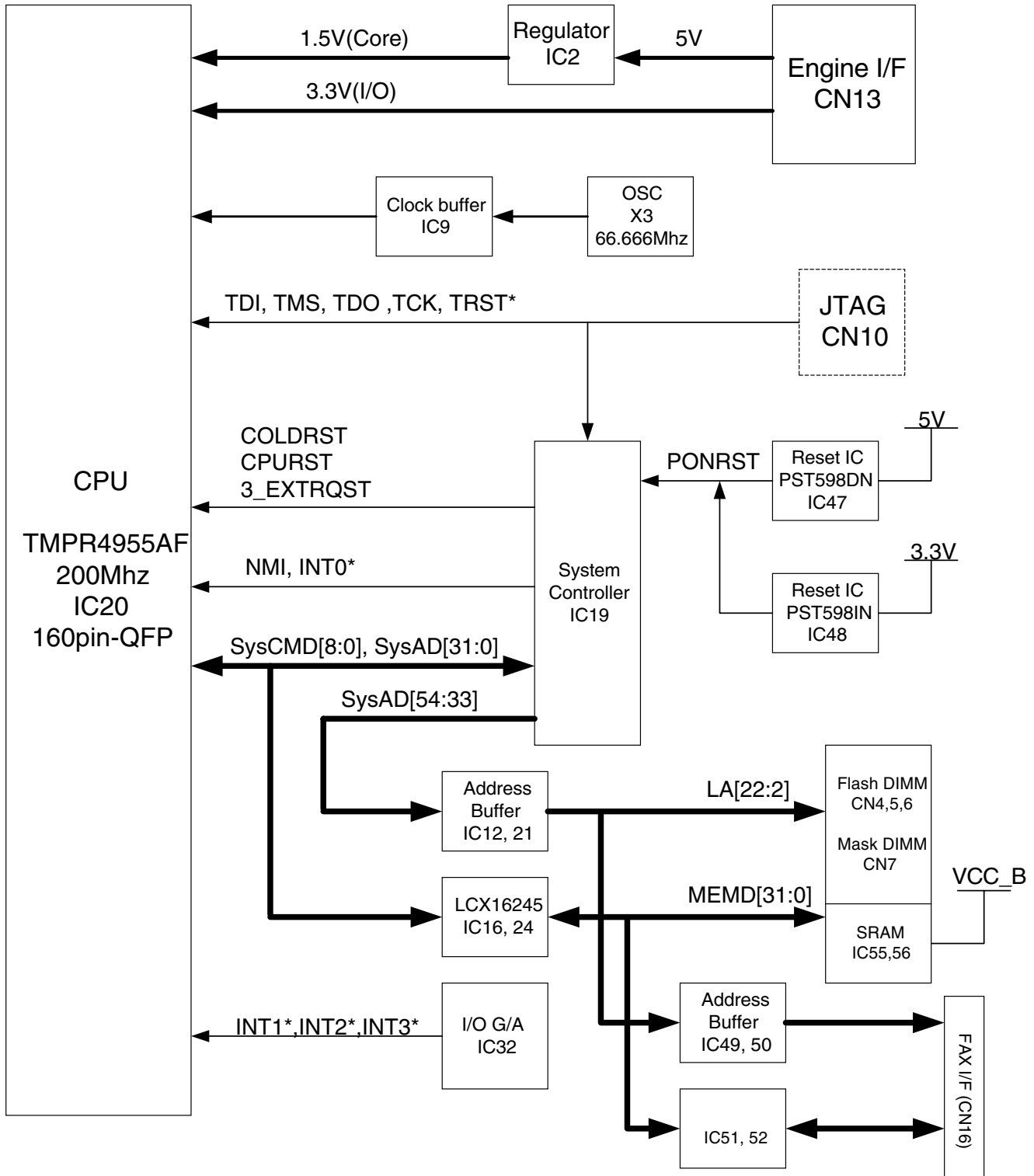
1. MFP Control PWB(for AR-M350U/M450U)

A.Block Diagrams

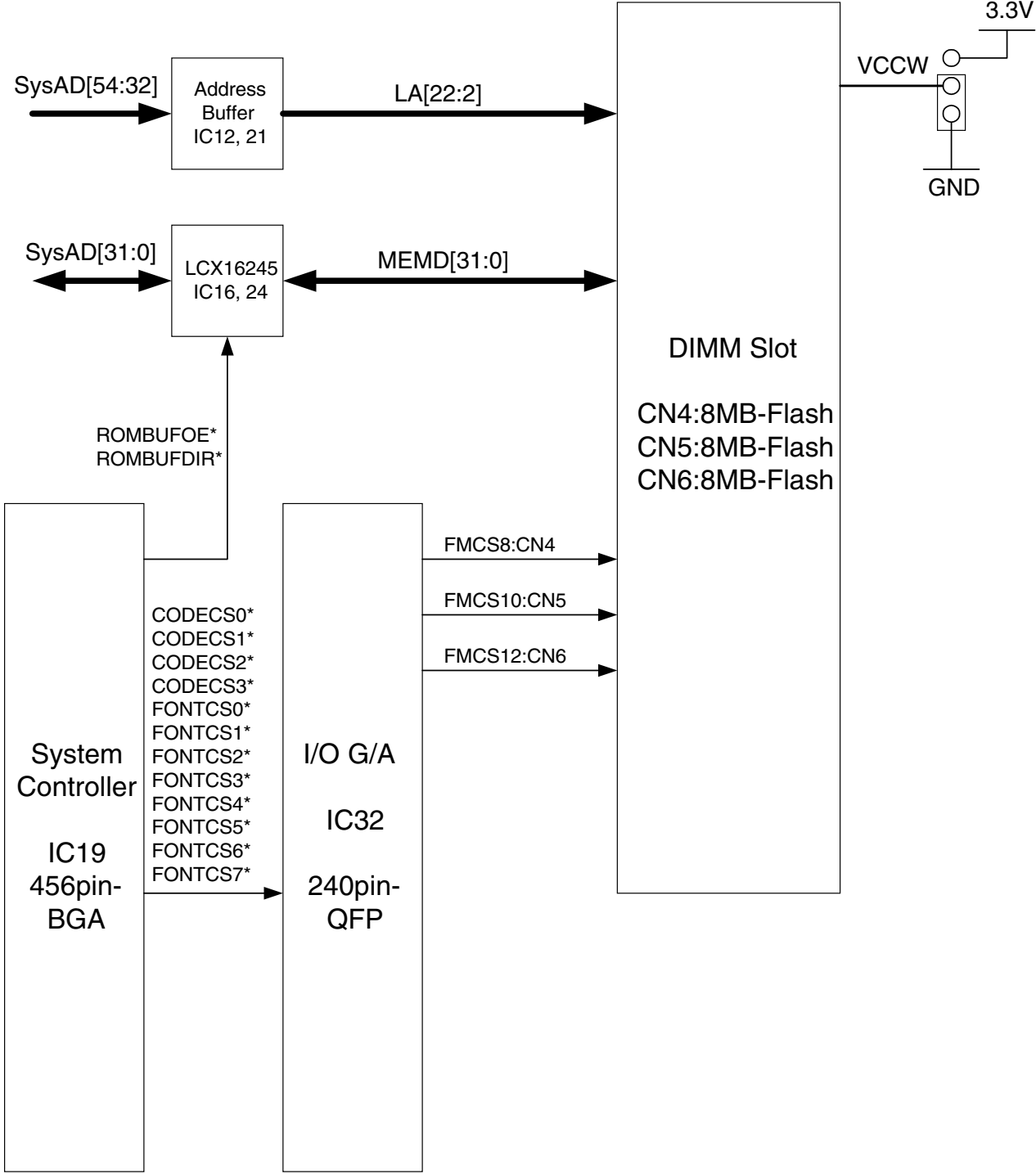
General



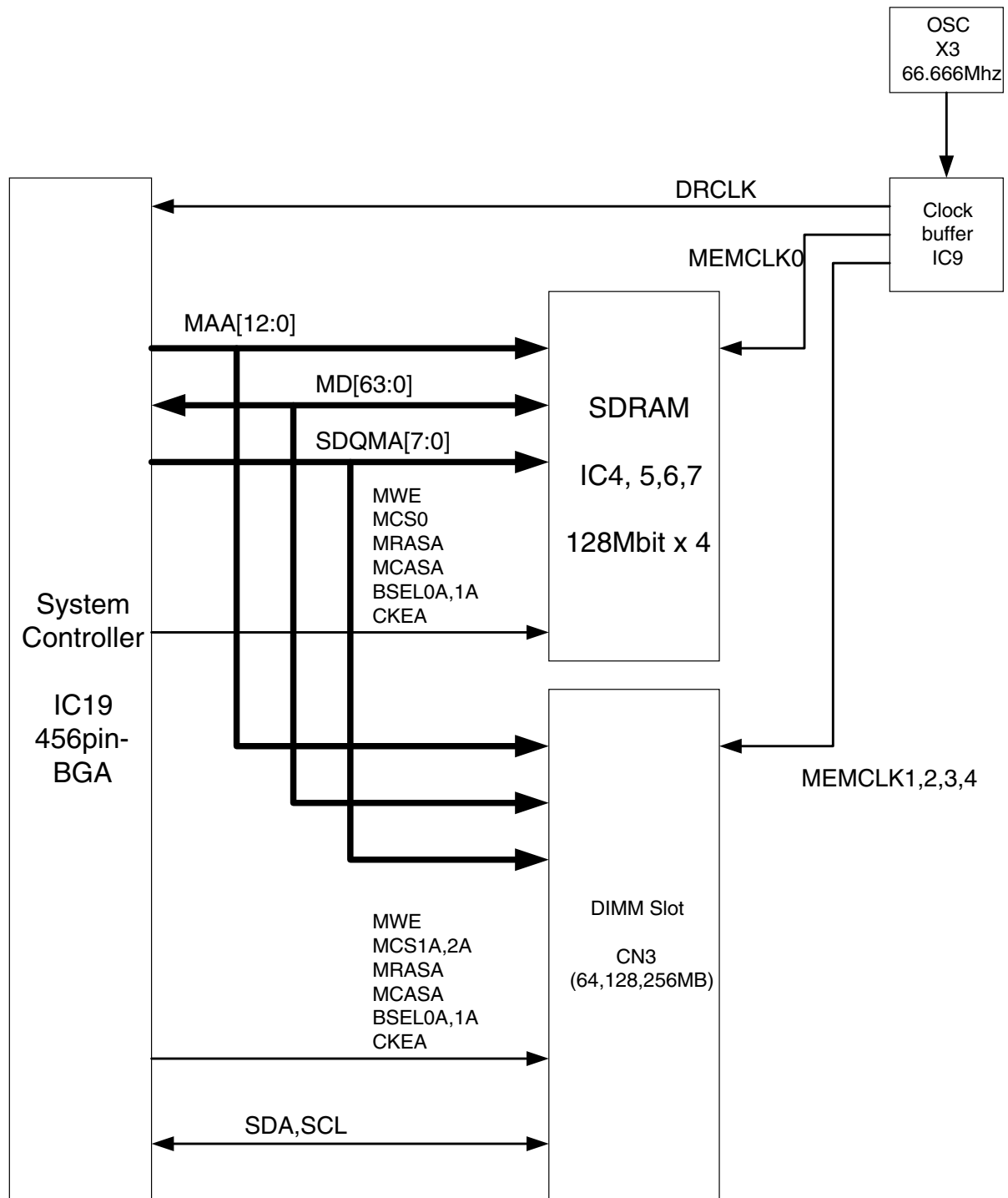
CPU Block



ROM Block (Flash & Mask)

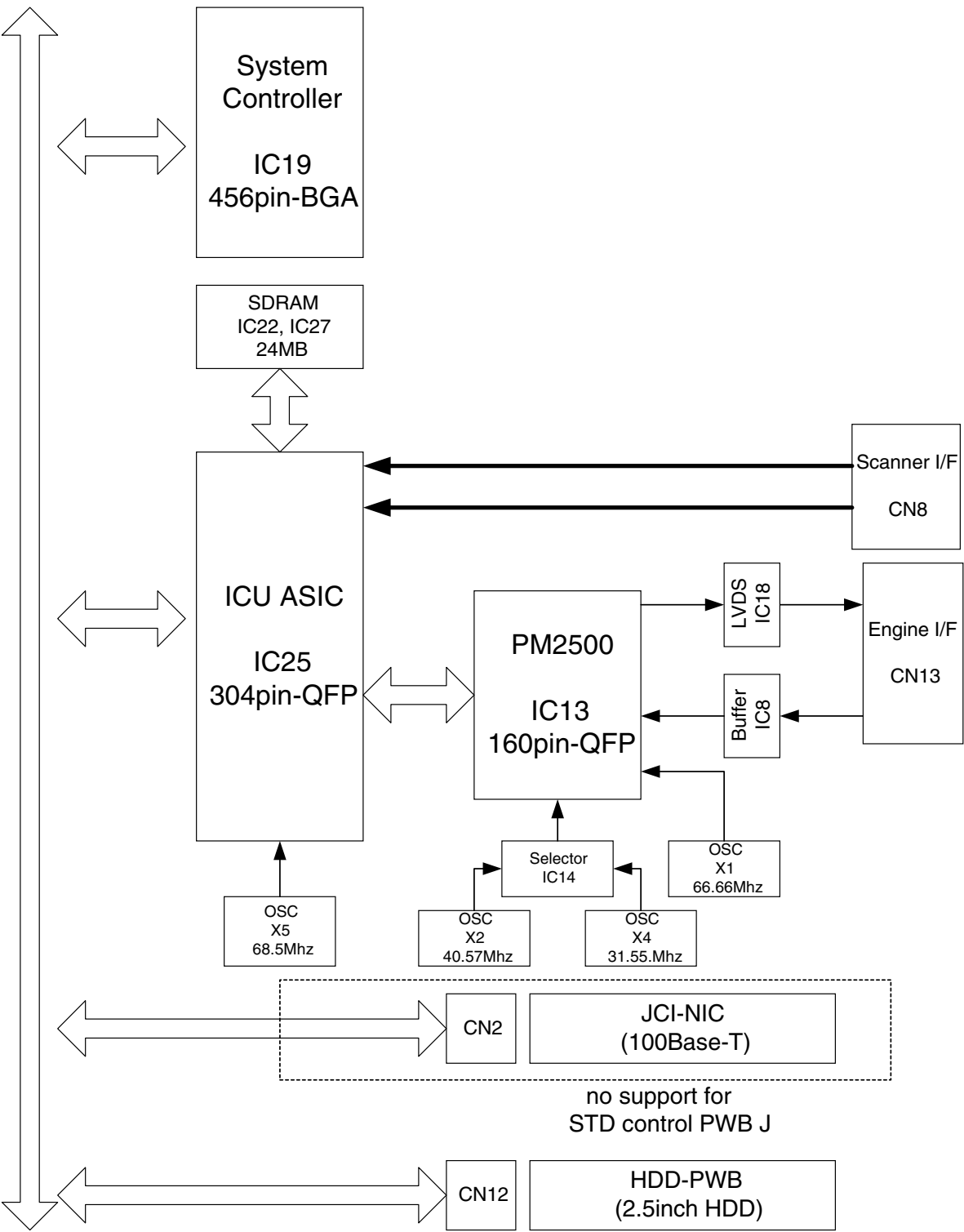


SDRAM Block (Standard & Option)

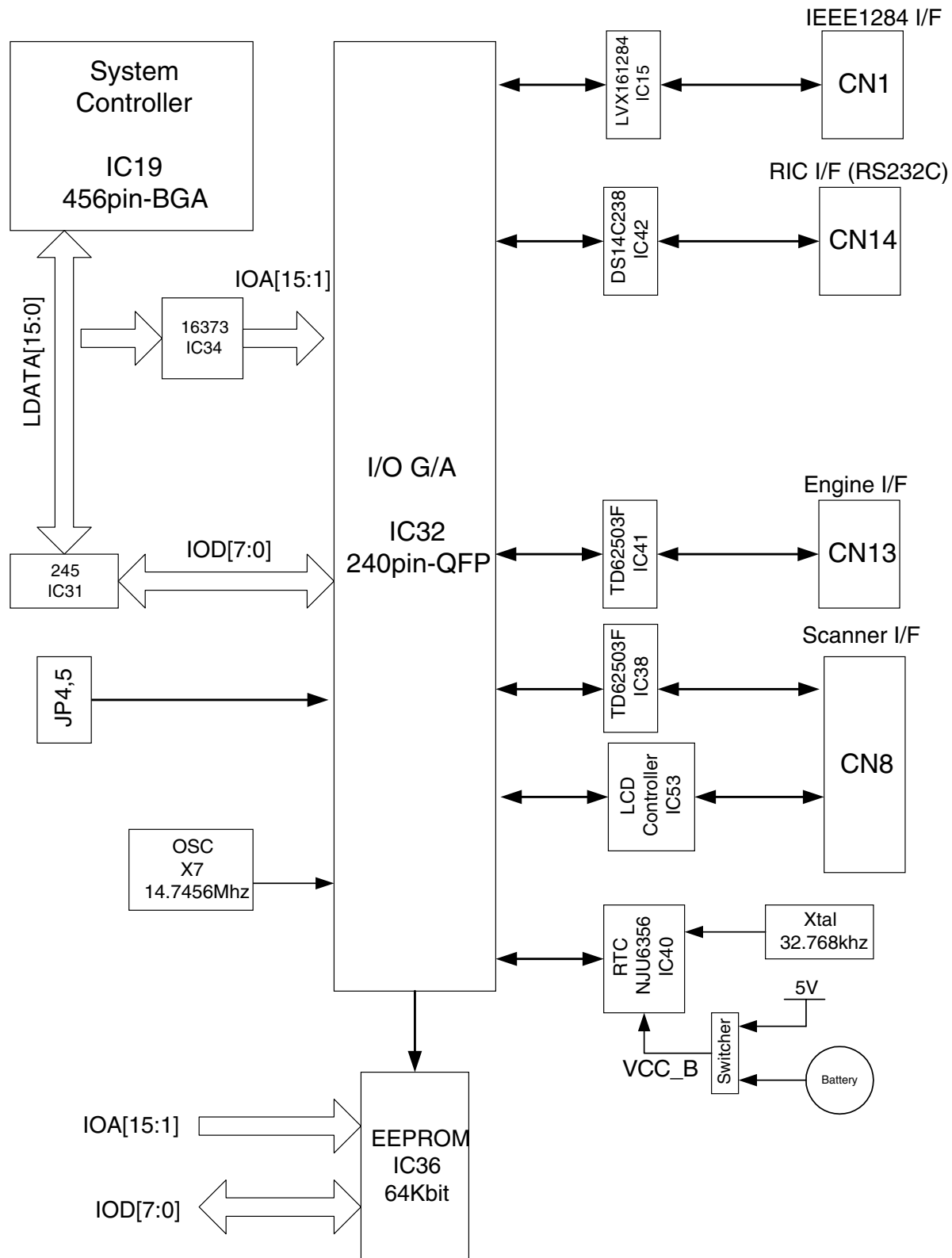


PCI Block (ICU & Option)

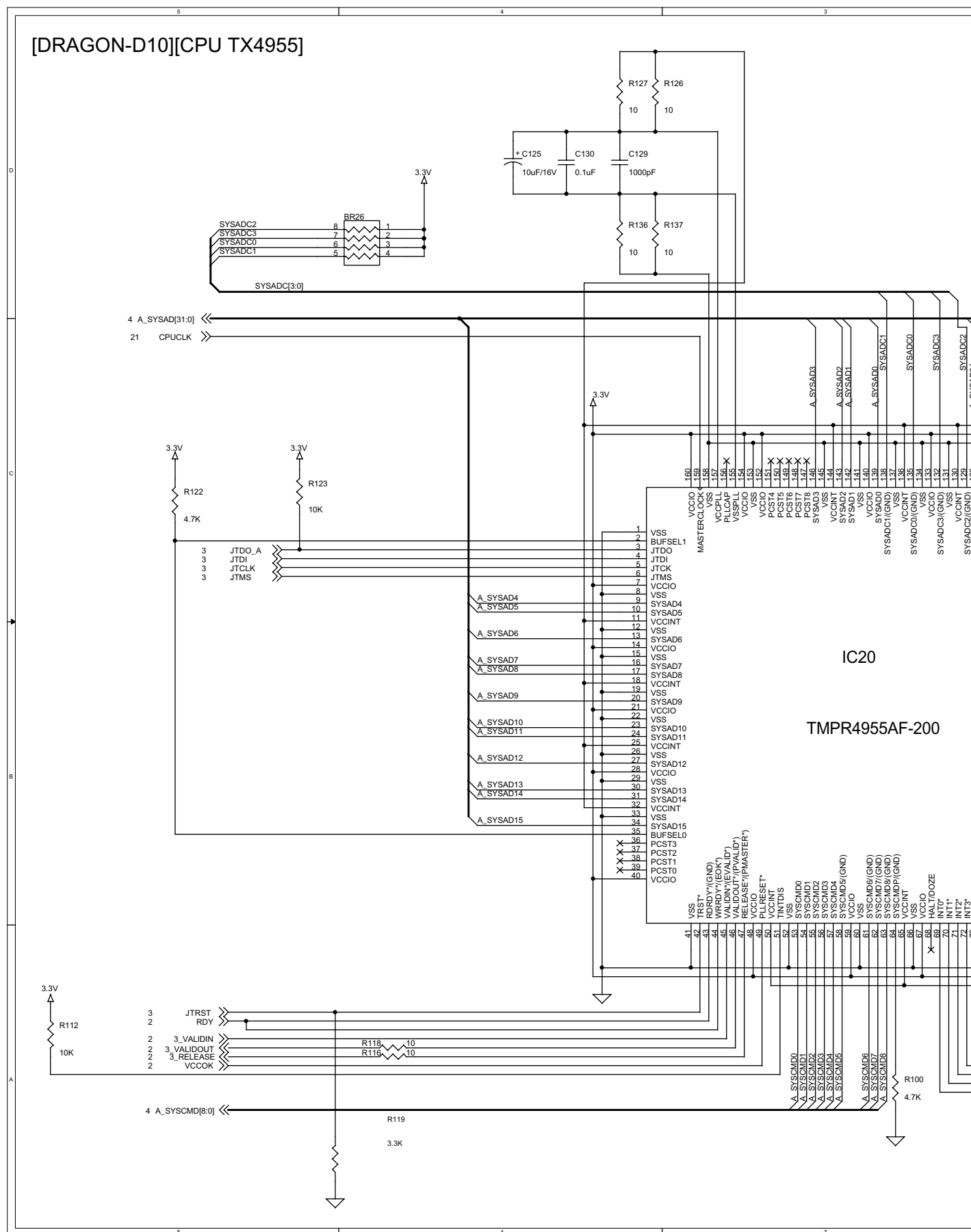
PCI-Bus



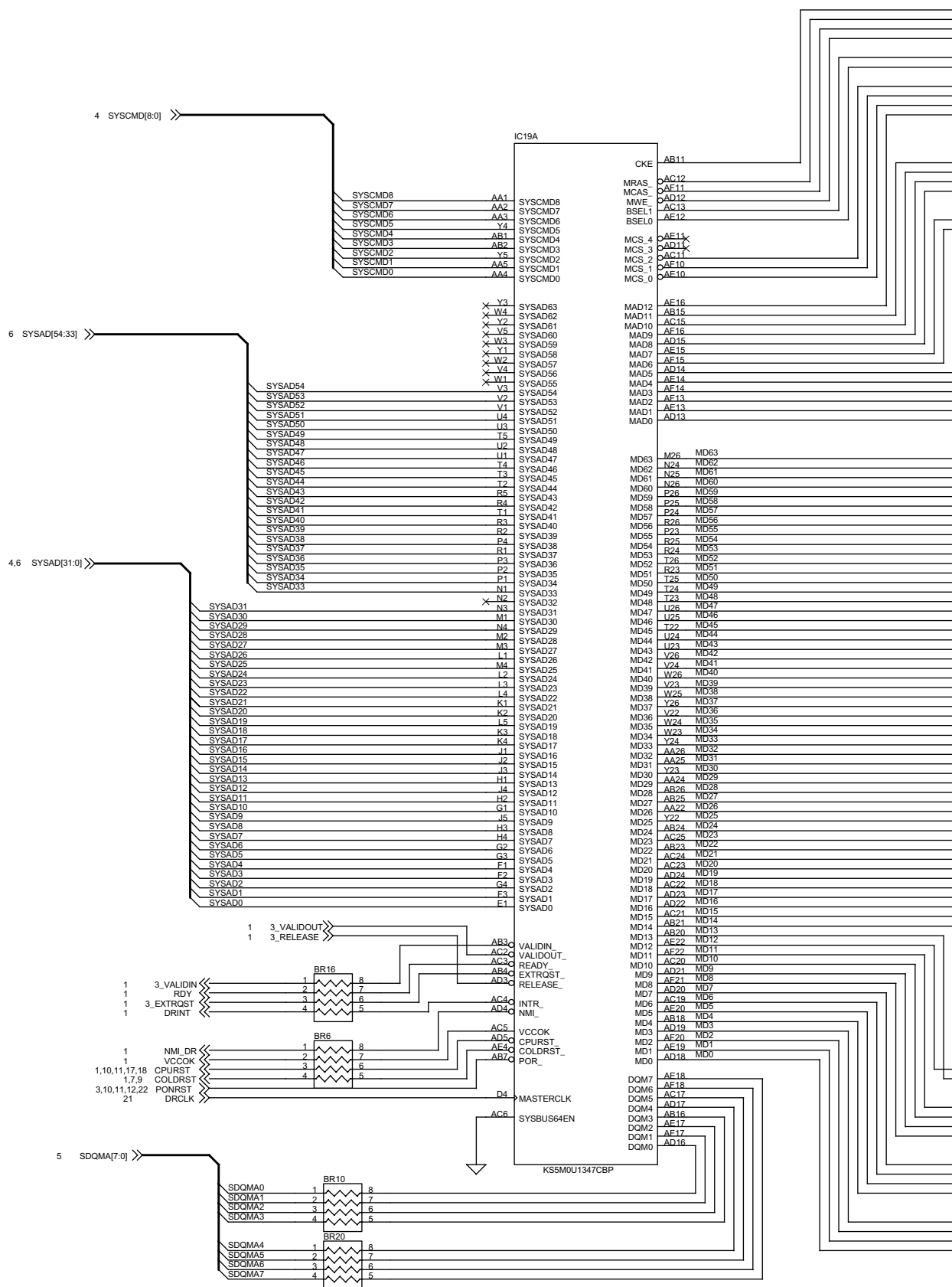
I/O Block (EEPROM & Misc I/O)

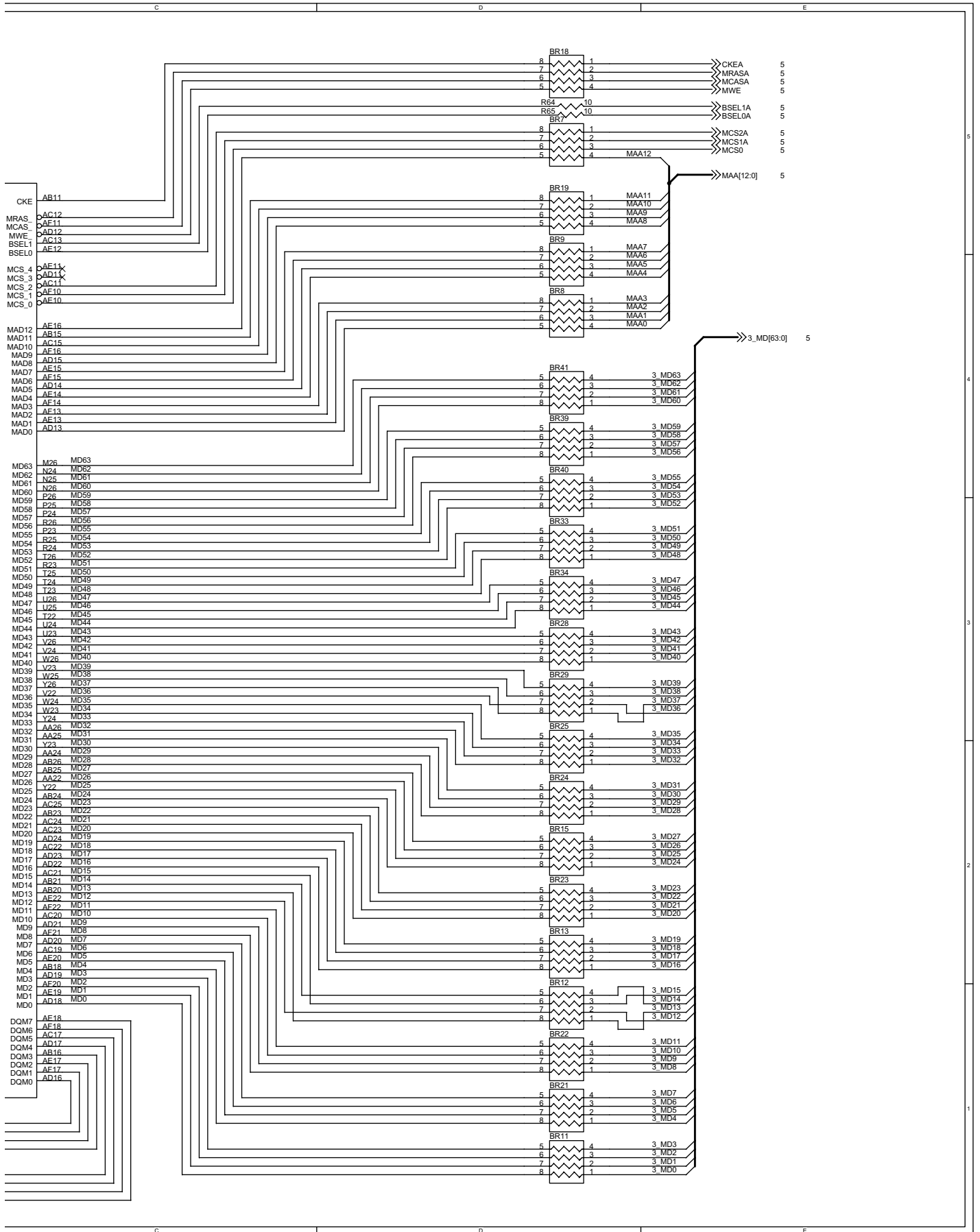


B. Circuit Diagram

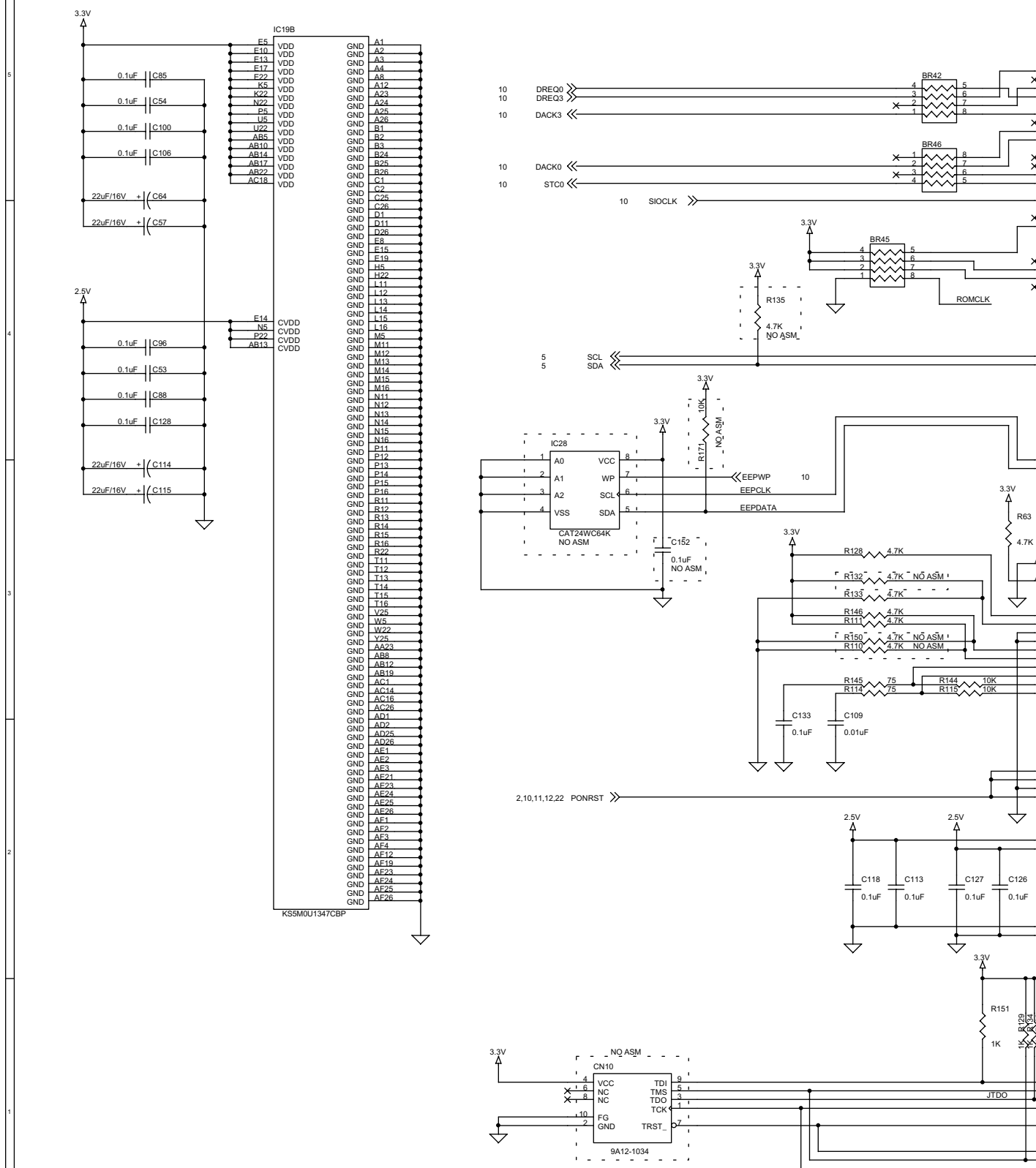


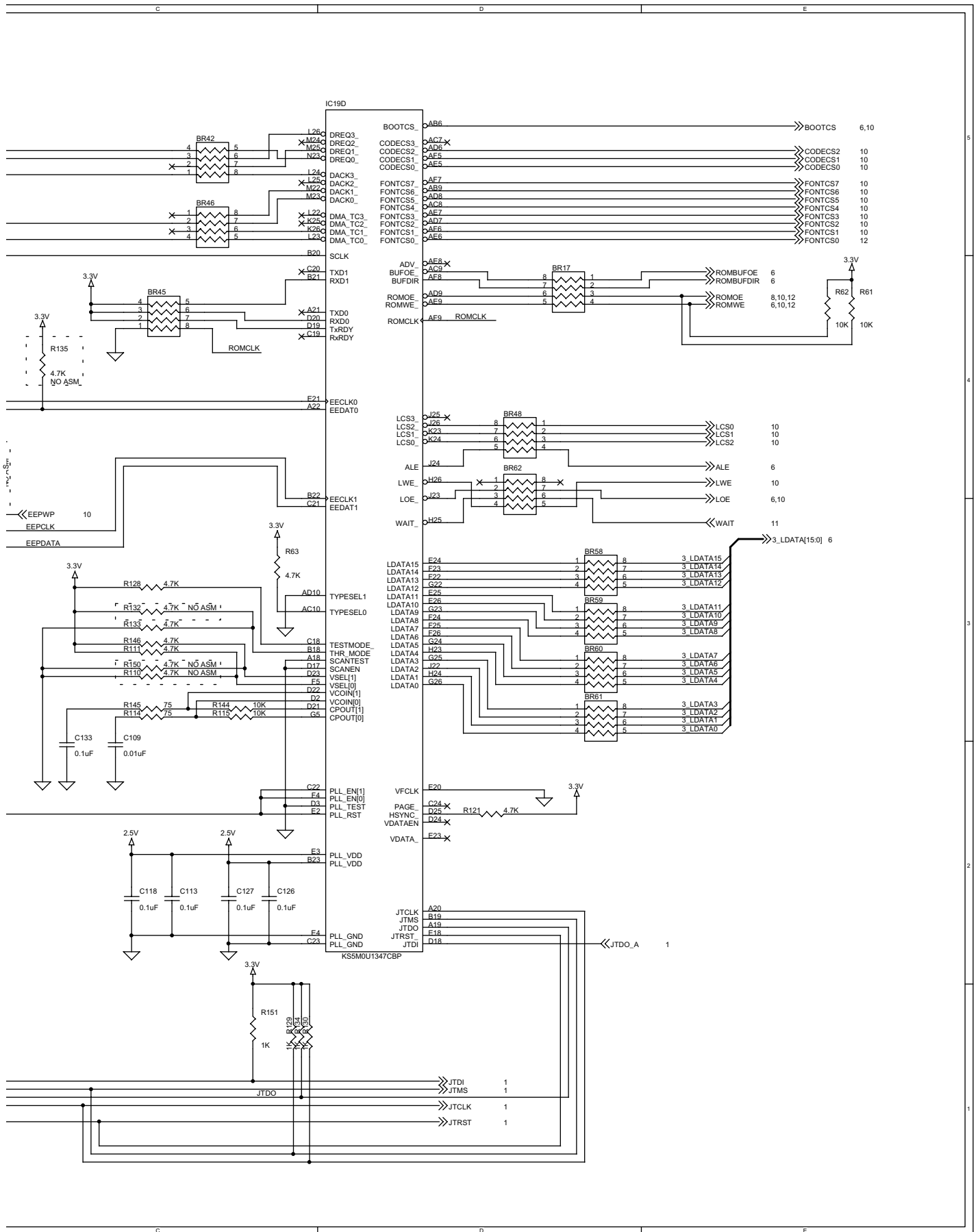
[Print Controller (for AR-M350U / M450U) (1/3)]





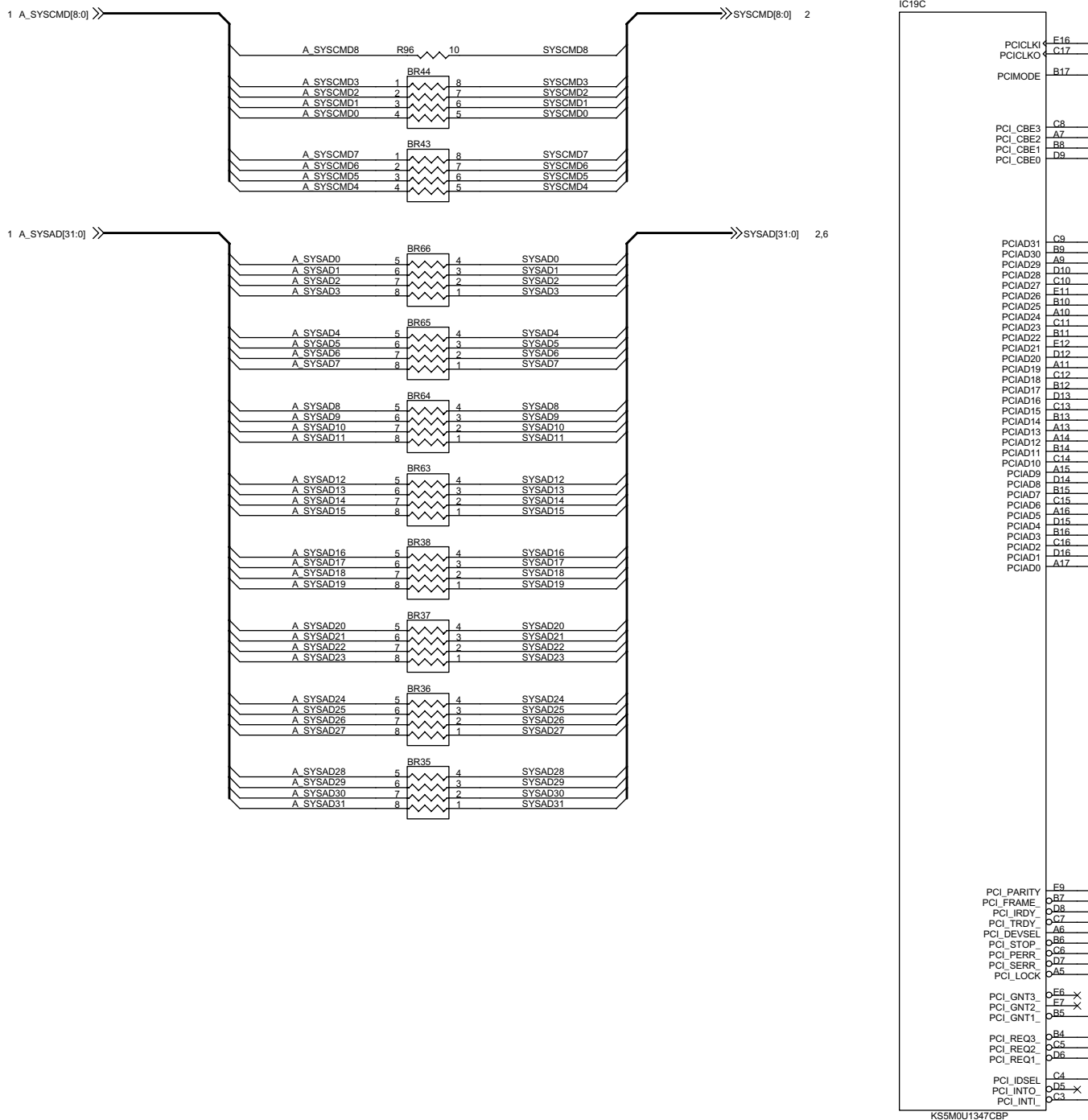
[Print Controller (for AR-M350U / M450U) (2/3)]



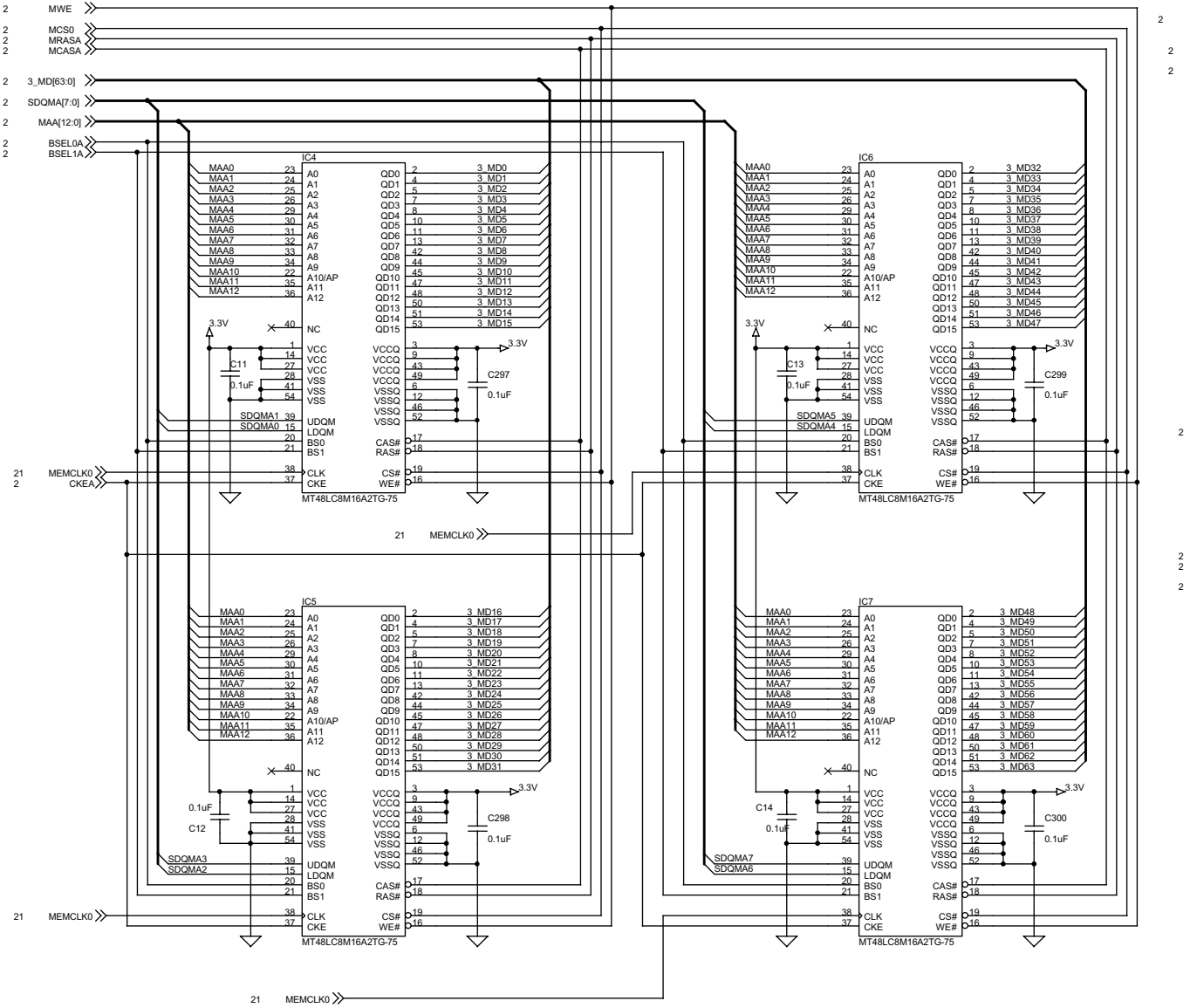


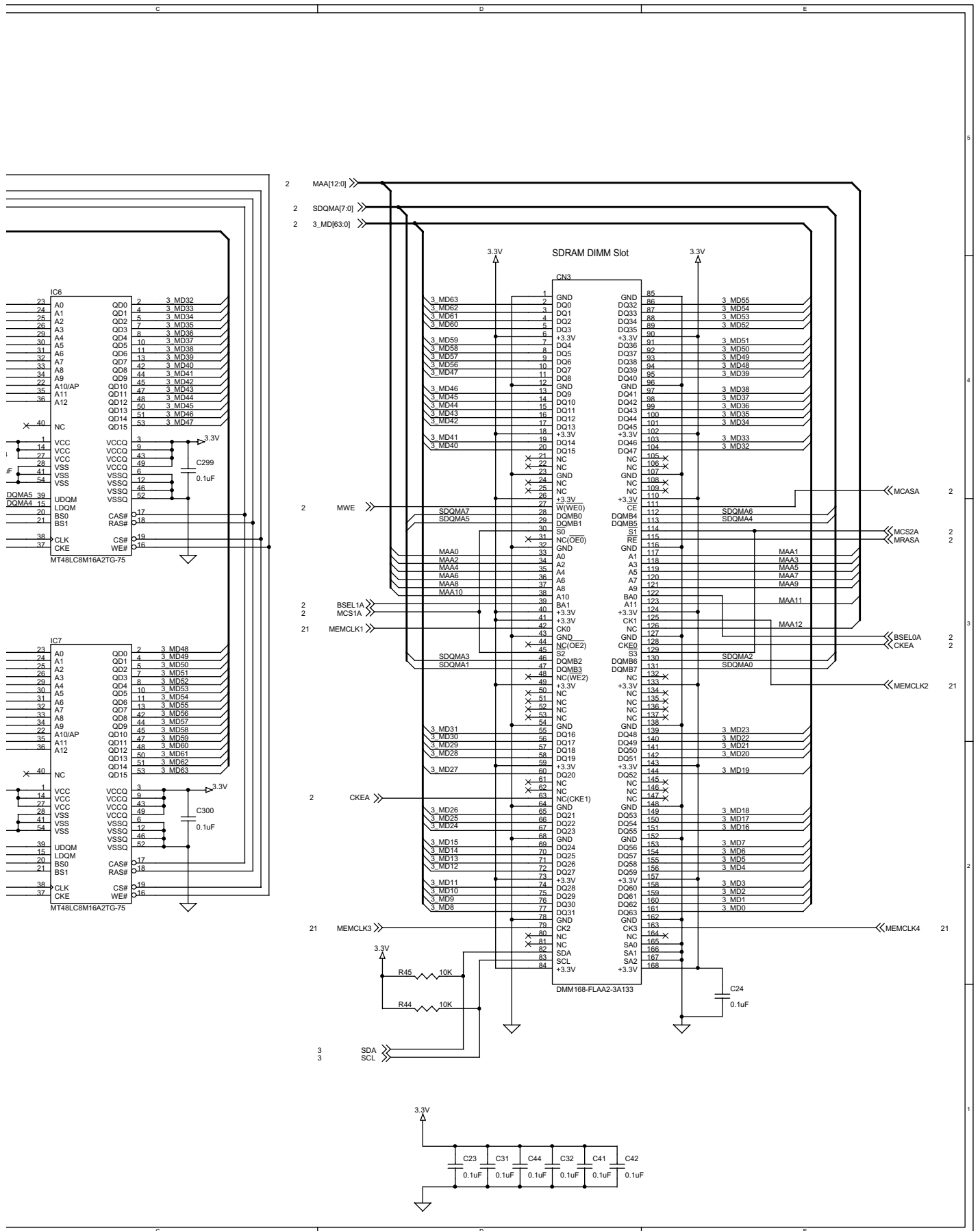
AR-M350U CIRCUIT DIAGRAM 9-13

[Print Controller (for AR-M350U / M450U) (3/3)]



[SDRAM]



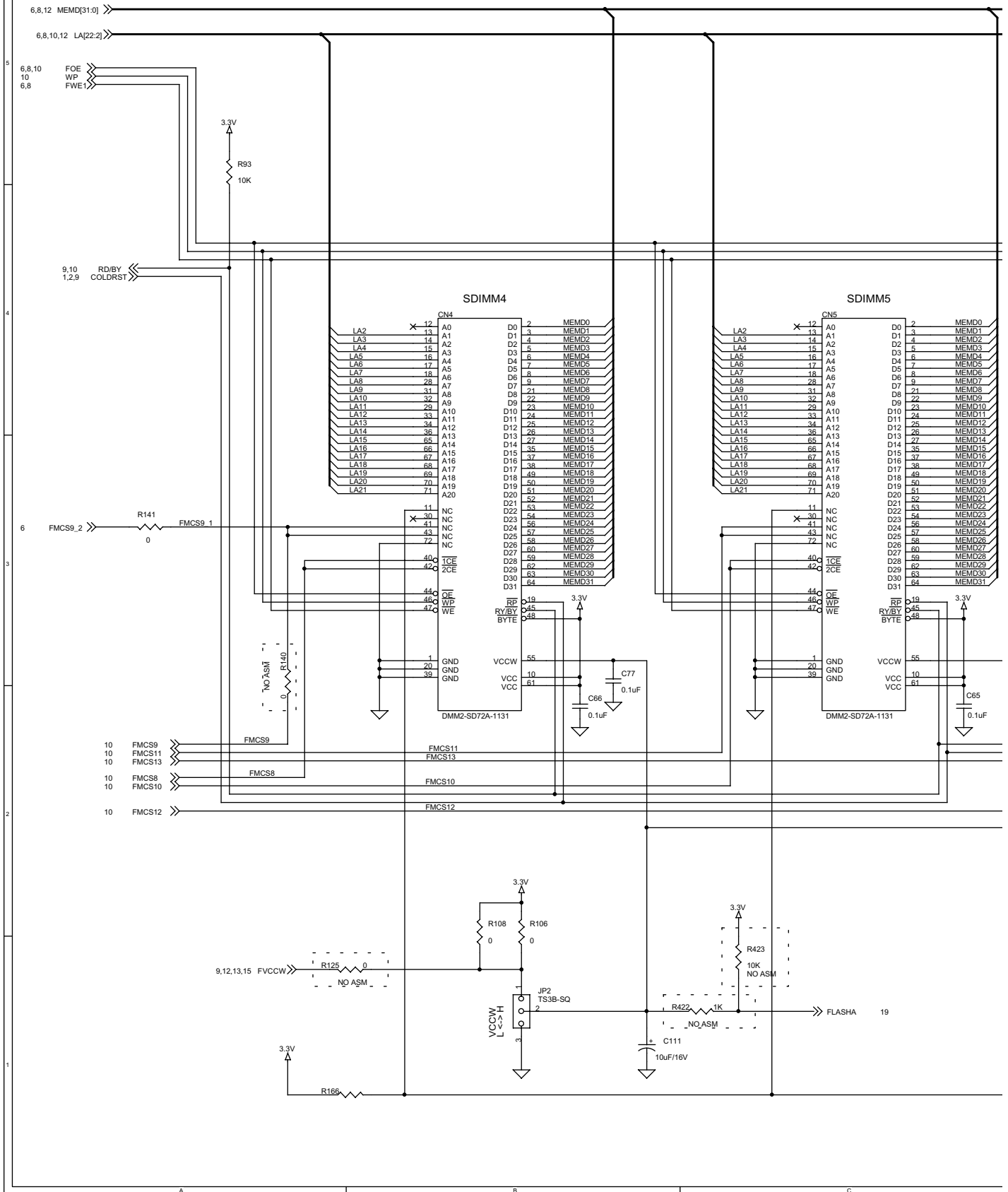


AR-M350U CIRCUIT DIAGRAM 9-17

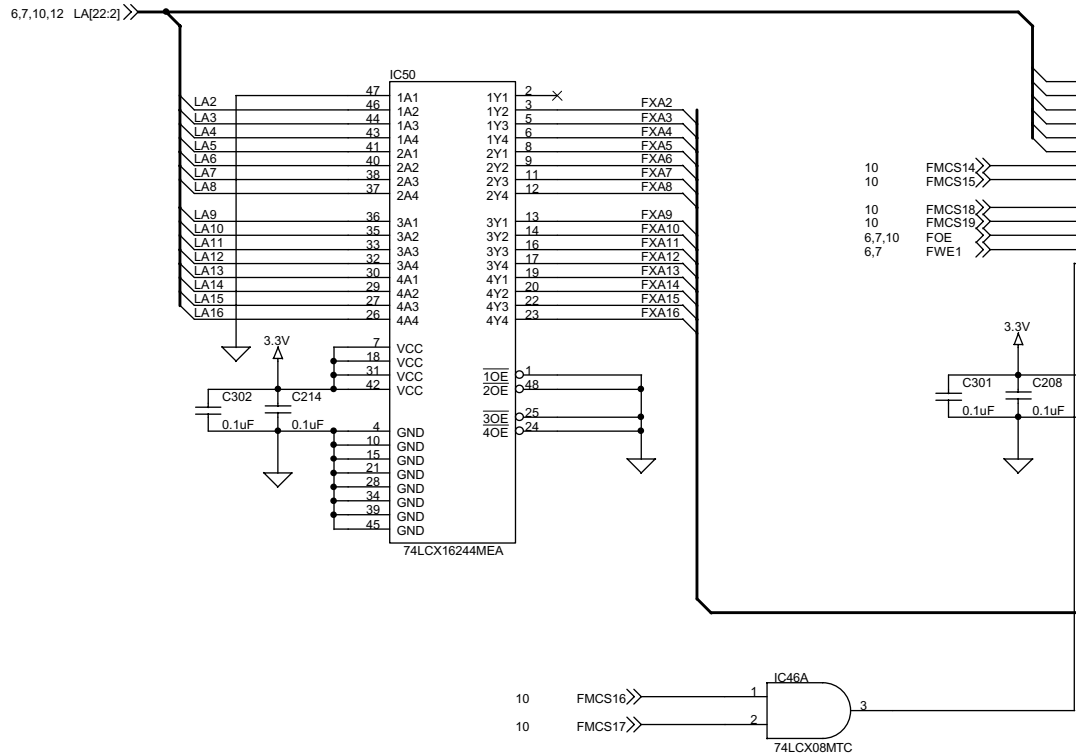
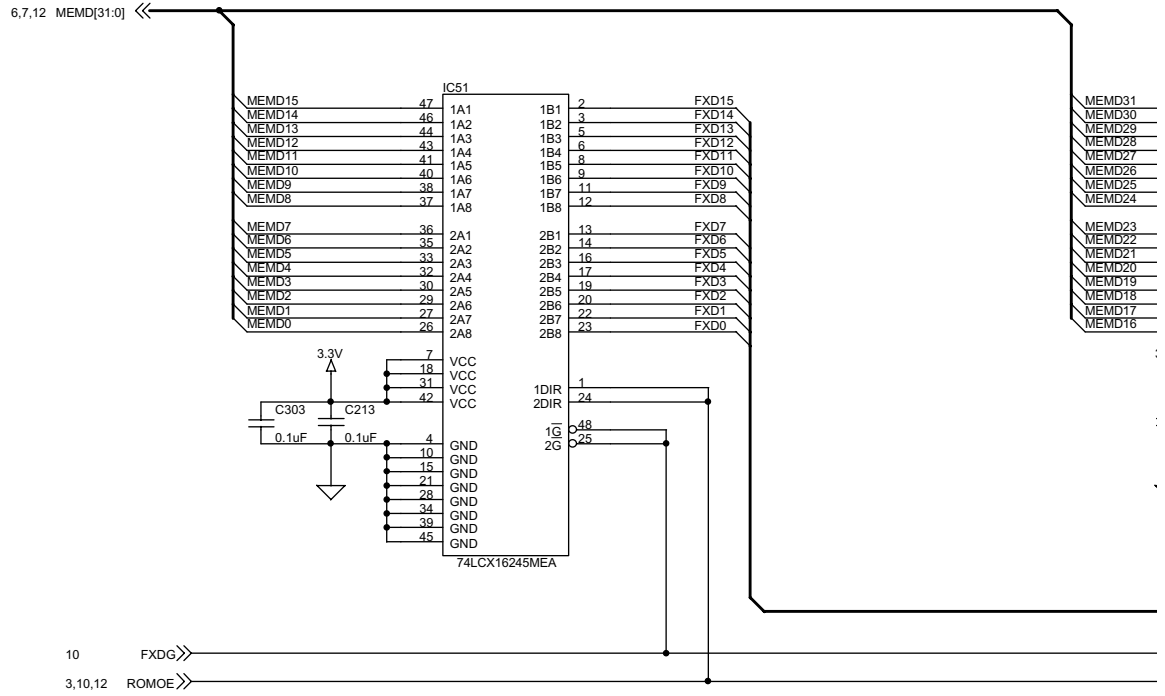
The [BUFFER] section schematic includes the following components and connections:

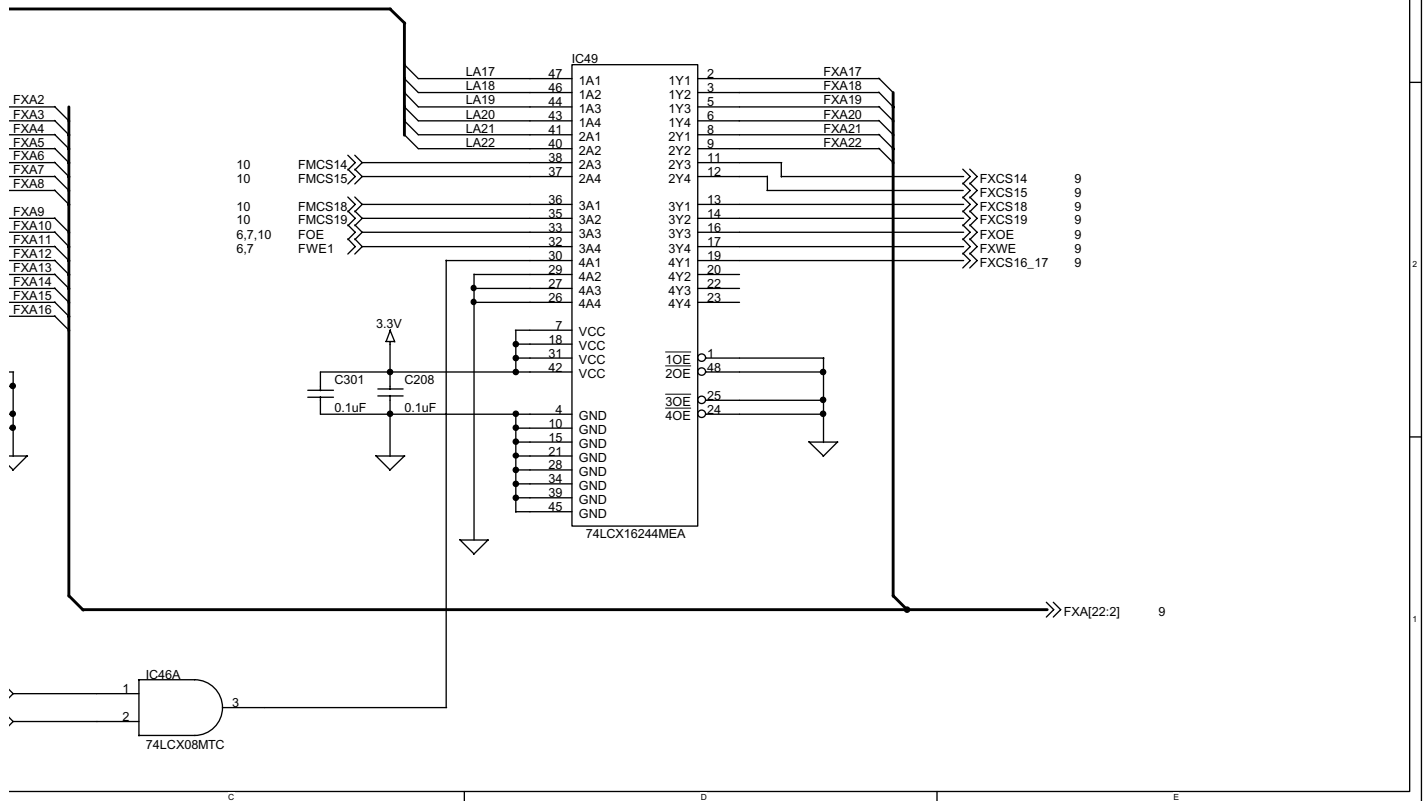
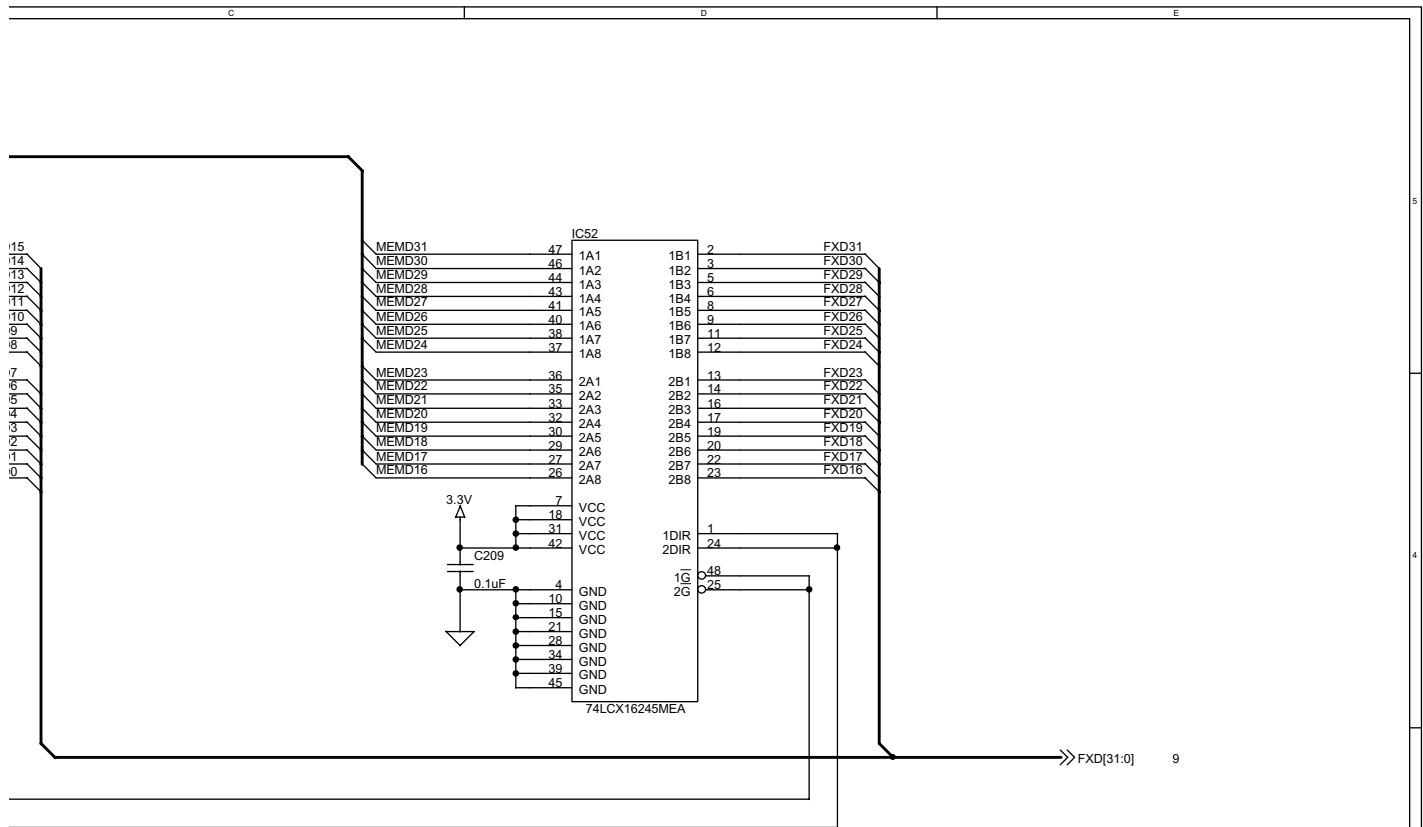
- IC21 (74LCX16244MEA):** A hex inverters IC. Inputs include SYSAD33-40, SYSAD41-48, and 3.3V. Outputs include LA2-LA16, FWE2, and FWE1.
- IC24 (74LCX16245MEA):** A hex inverters IC. Inputs include SYSAD15-28, SYSAD7-14, and 3.3V. Outputs include MEM0-MEM15, 1DIR, 2DIR, 1G, 2G, and 2A.
- IC12 (74LCX244MTC):** A hex buffers/line drivers IC. Inputs include SYSAD49-54, FWE0, and 3.3V. Outputs include LA17-LA22, FWE1, and FWE2.
- IC11C (74LCX32MTC):** A 2-input AND gate. Inputs are FWE0 and ROMWE. Output is FWE1.
- IC28A (74LCX08MTC):** A 2-input AND gate. Inputs are BOOTCS and FMCS9_2. Output is SLCTIN_P.
- IC34 (74LCX16373MEA):** A 3-state hex inverters IC. Inputs include 3_LDATA15-28, ALE, and 3.3V. Outputs include IOA15-28, 1LE, and 2LE.
- IC31 (74LCX16244MEA):** A hex inverters IC. Inputs include 3_LDATA15-28, 3.3V, and 0.1uF capacitors. Outputs include 3_LDATA15-28, 1A1-1A8, 2A1-2A8, 3A1-3A8, 4A1-4A8, 5A1-5A8, 6A1-6A8, 7A1-7A8, 8A1-8A8, 9A1-9A8, 10A1-10A8, 11A1-11A8, 12A1-12A8, 13A1-13A8, 14A1-14A8, 15A1-15A8, 16A1-16A8, 17A1-17A8, 18A1-18A8, 19A1-19A8, 20A1-20A8, 21A1-21A8, 22A1-22A8, 23A1-23A8, 24A1-24A8, 25A1-25A8, 26A1-26A8, 27A1-27A8, 28A1-28A8.

[FLASH SDIMM]

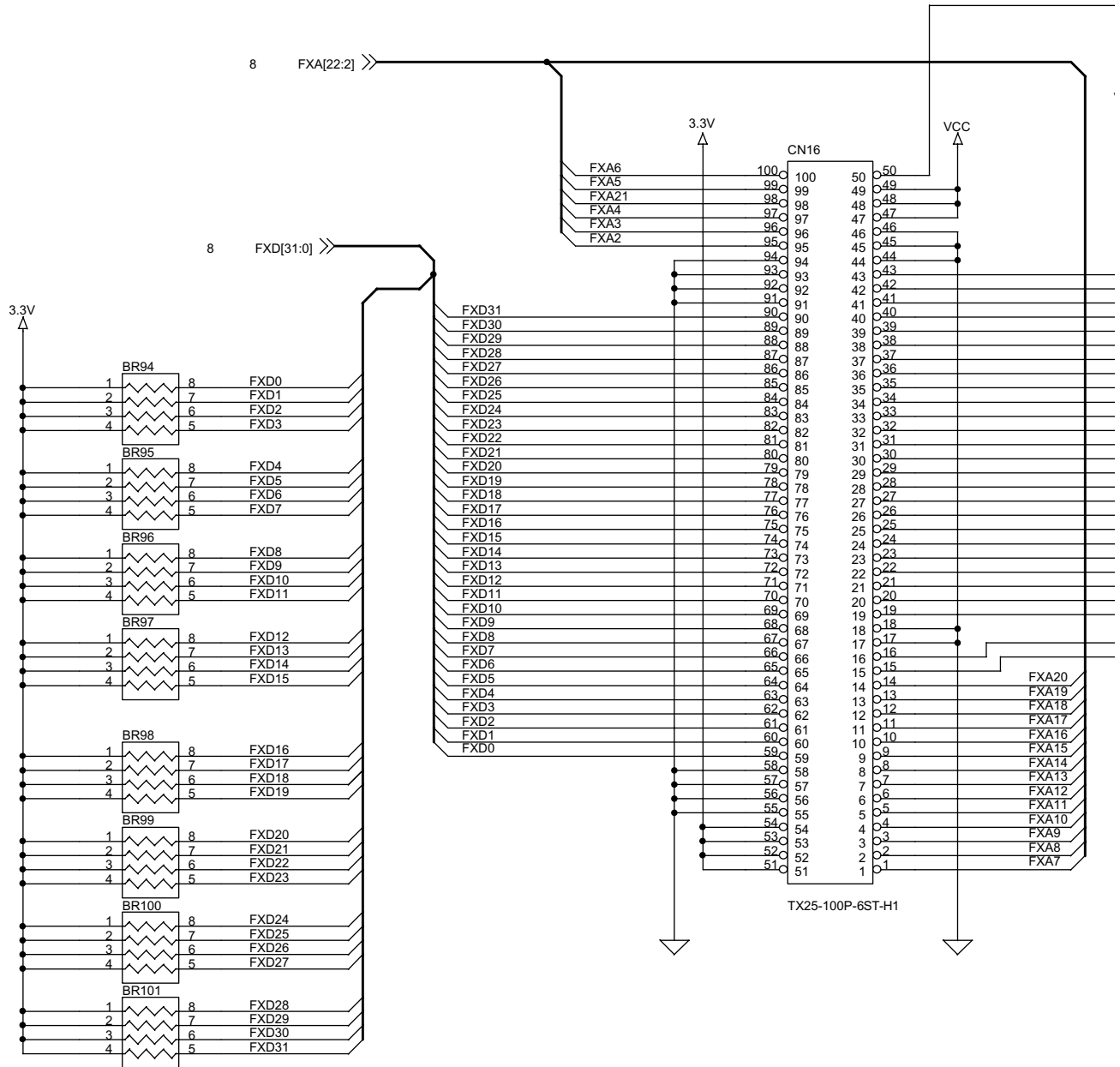


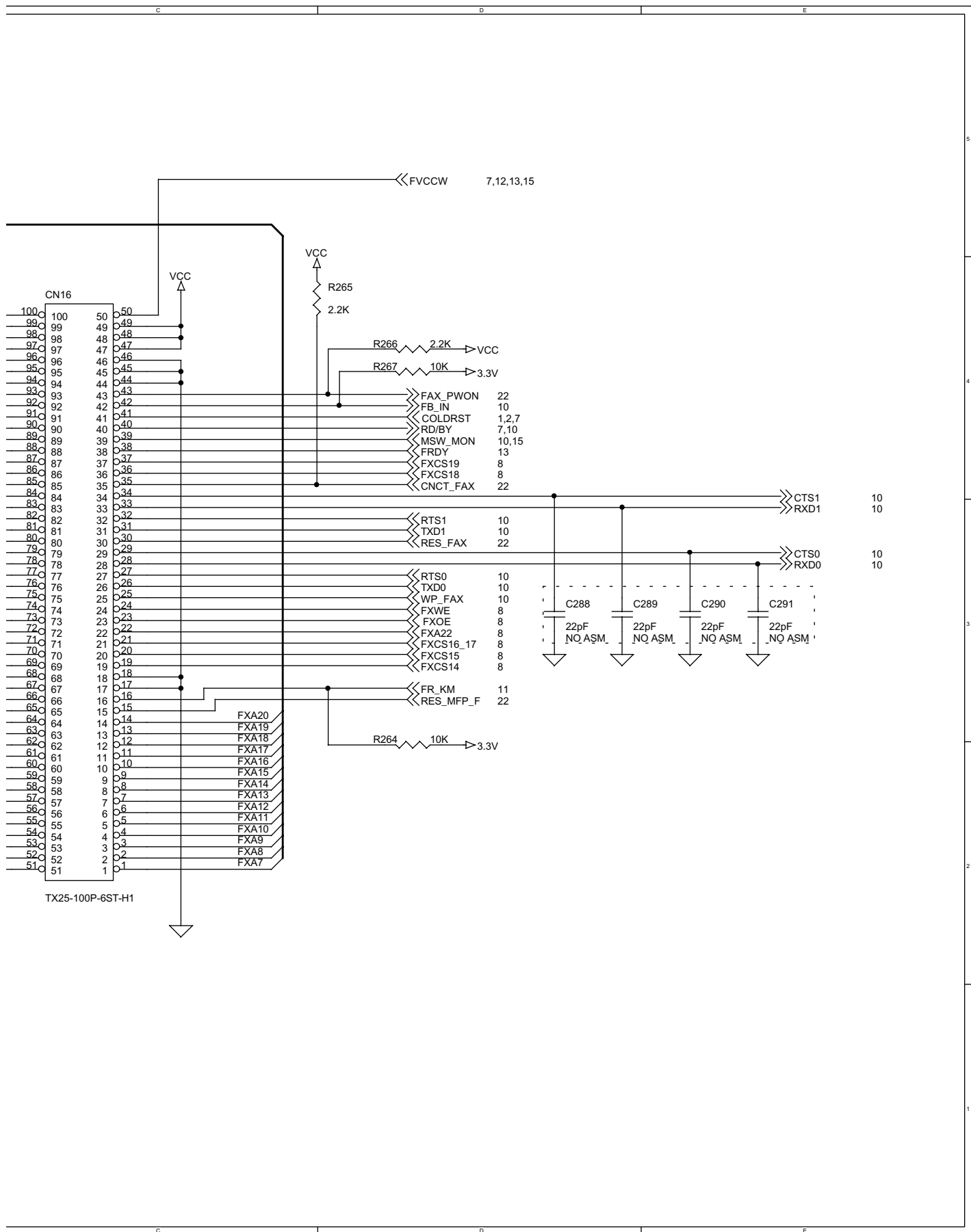
[FAX I/F BUF]



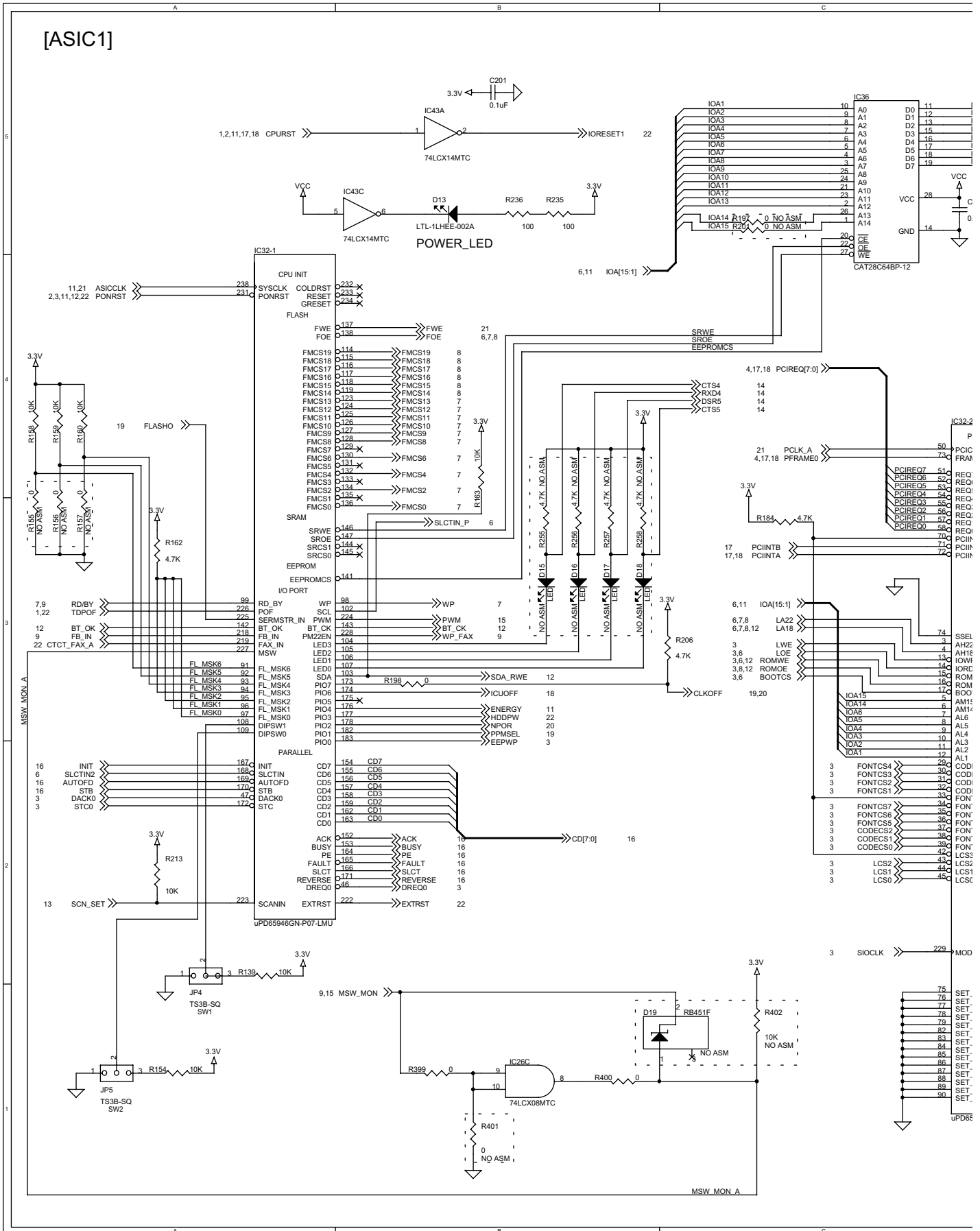


[FAX I/F CN]

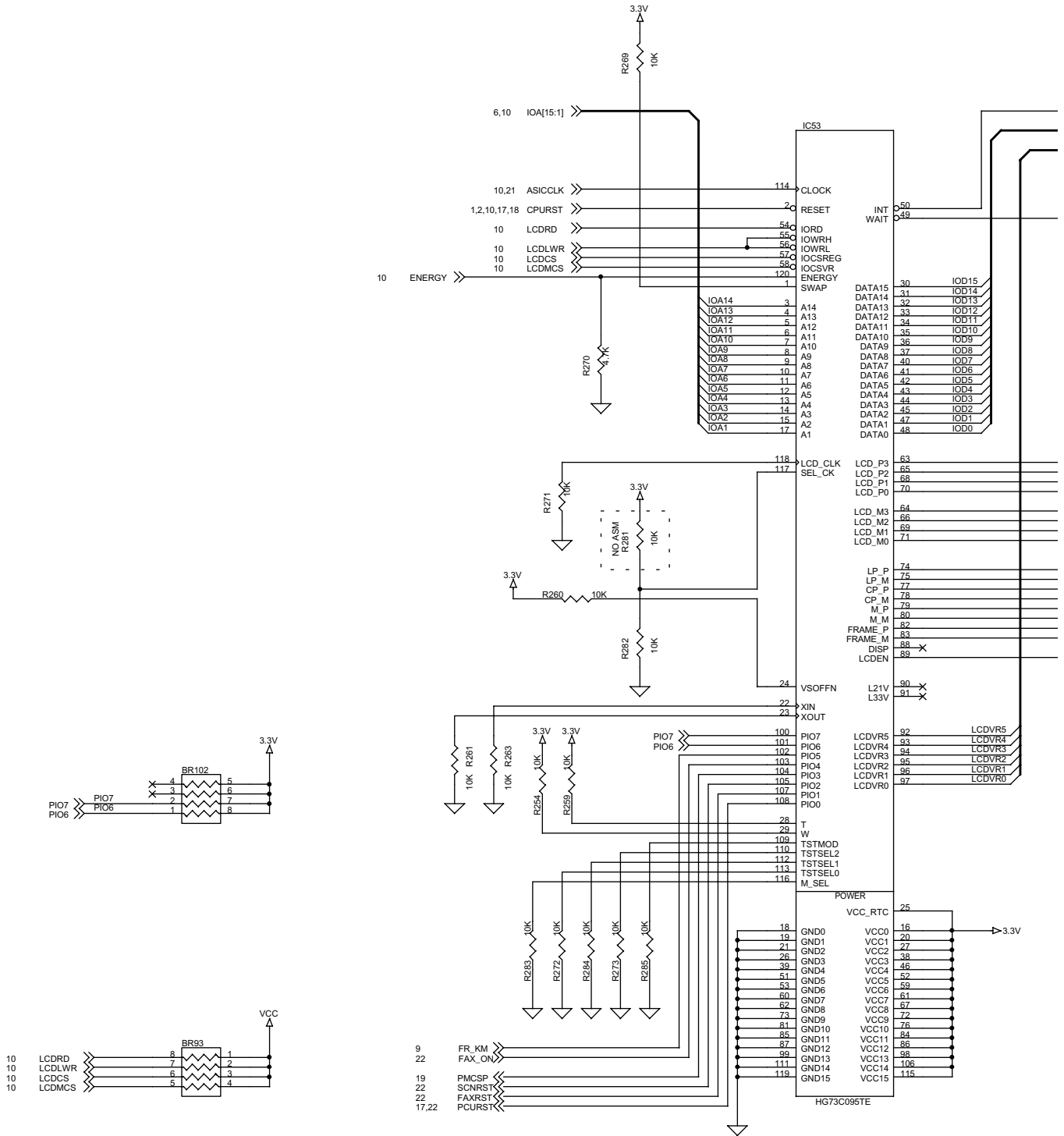


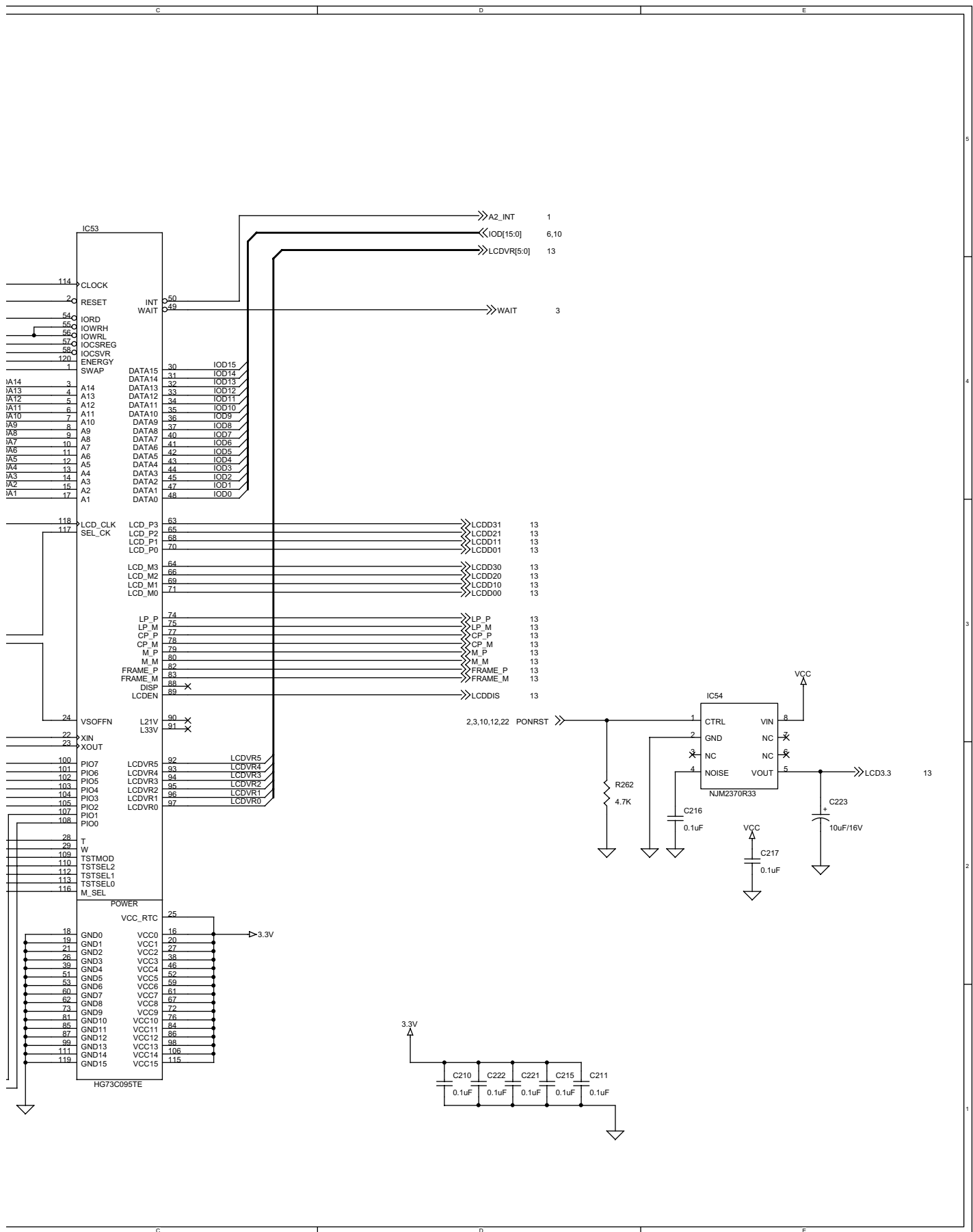


[ASIC1]



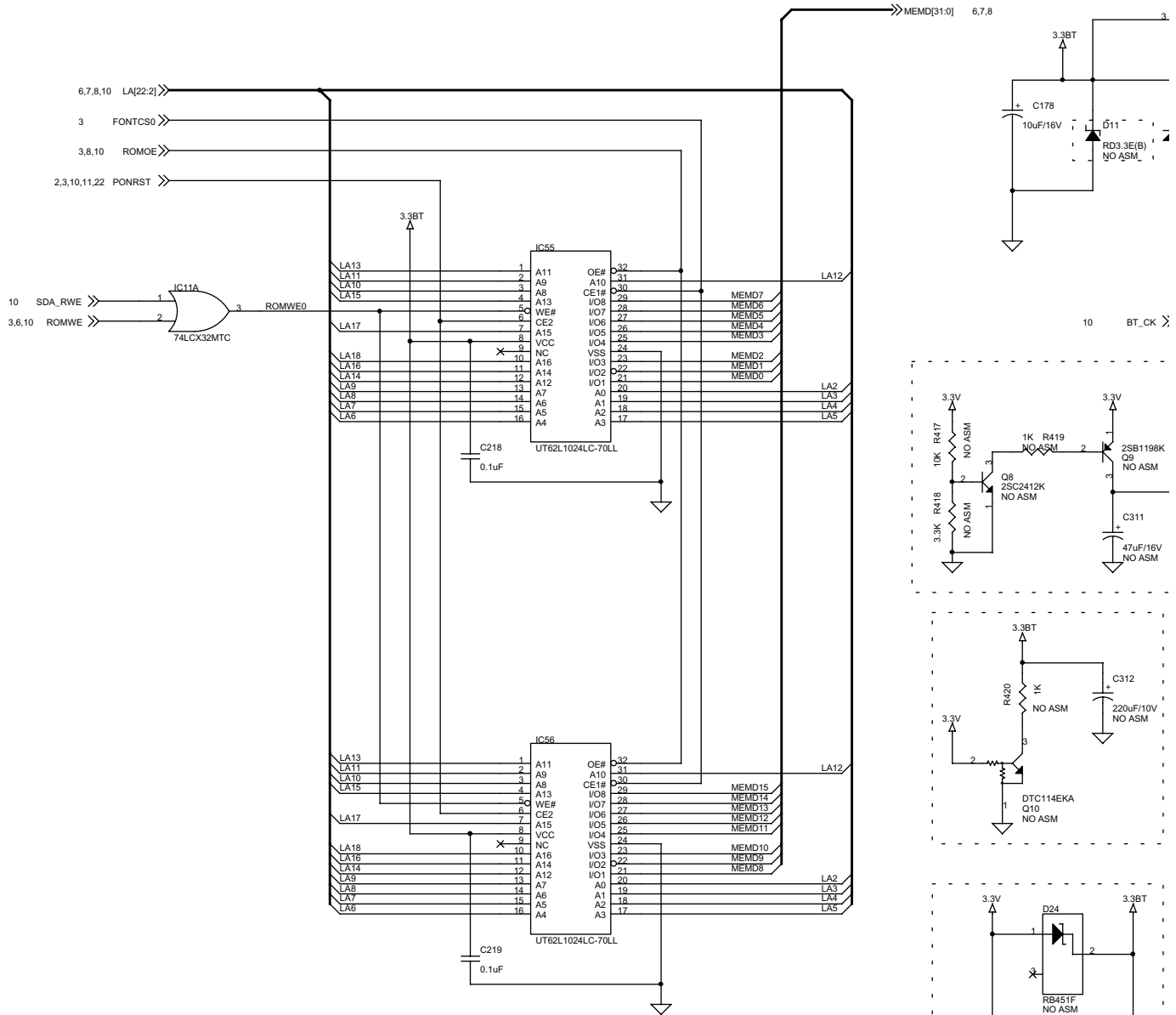
[ASIC2]

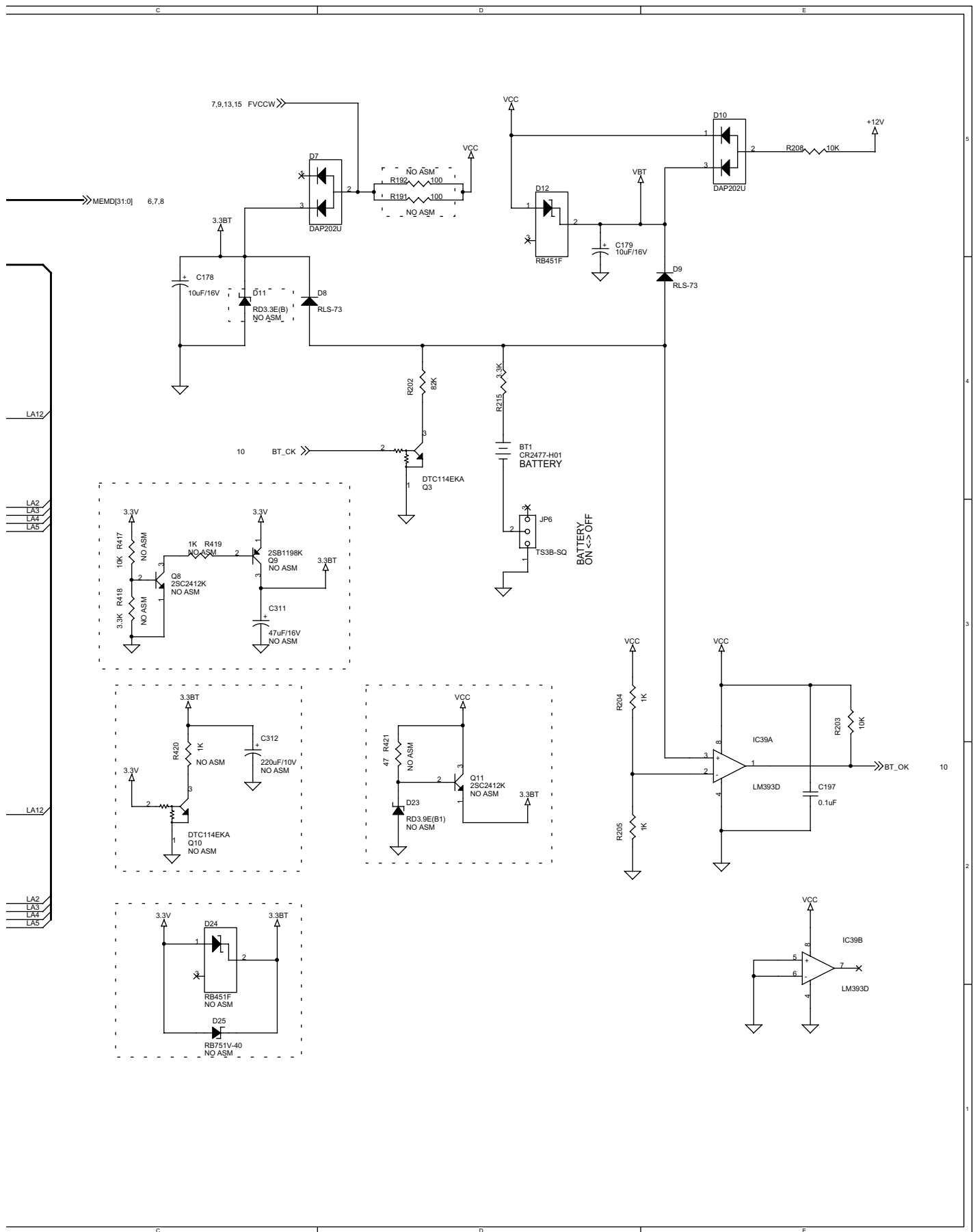




[SRAM / BATTERY]

7,9,13,15 FVCCW

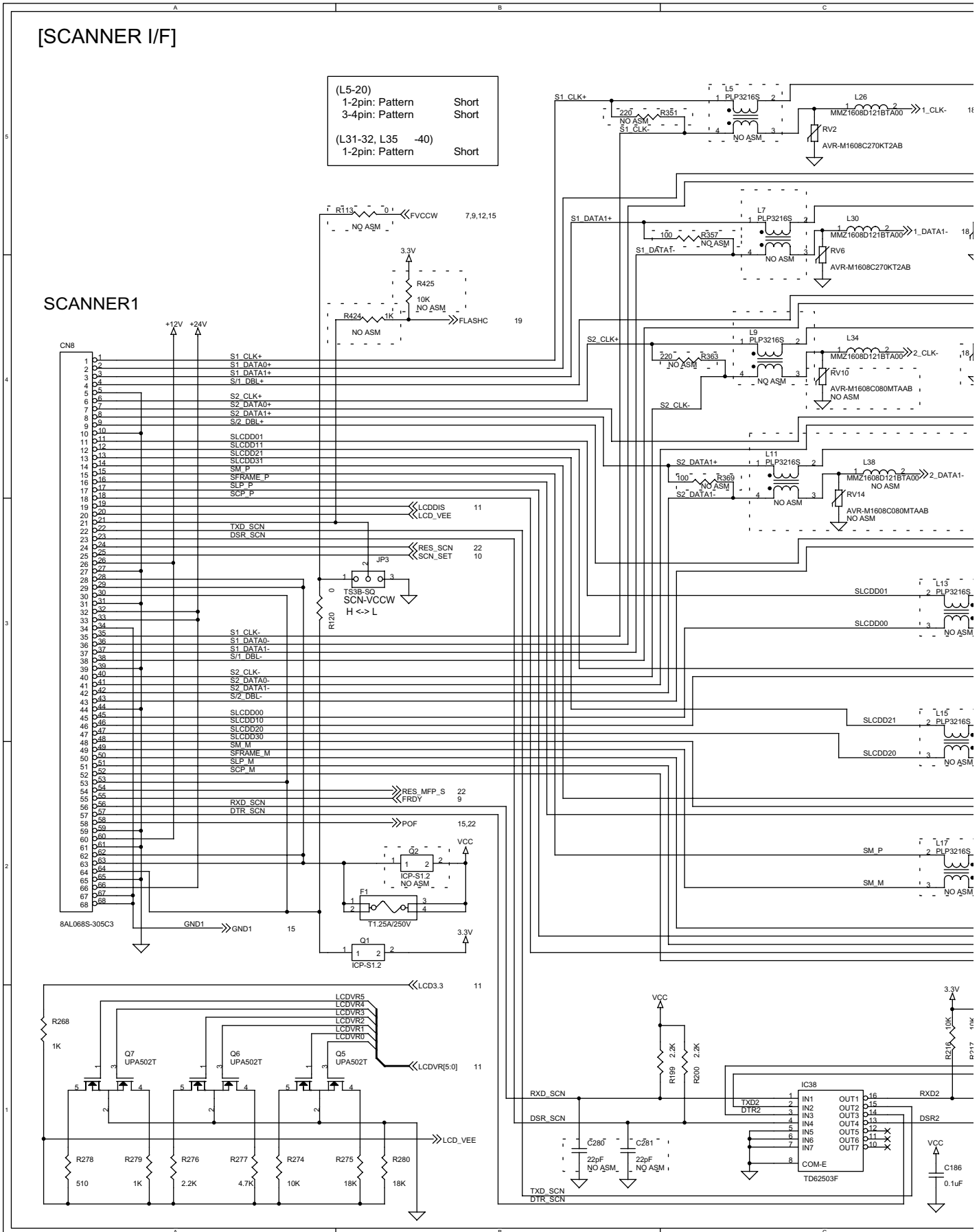




[SCANNER I/F]

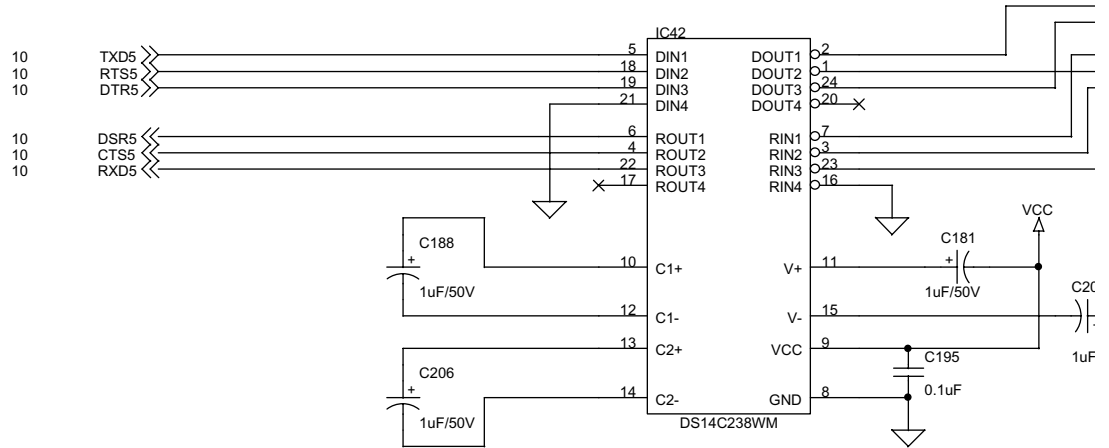
(L5-20)
1-2pin: Pattern Short
3-4pin: Pattern Short
(L31-32, L35 -40)
1-2pin: Pattern Short

SCANNER1

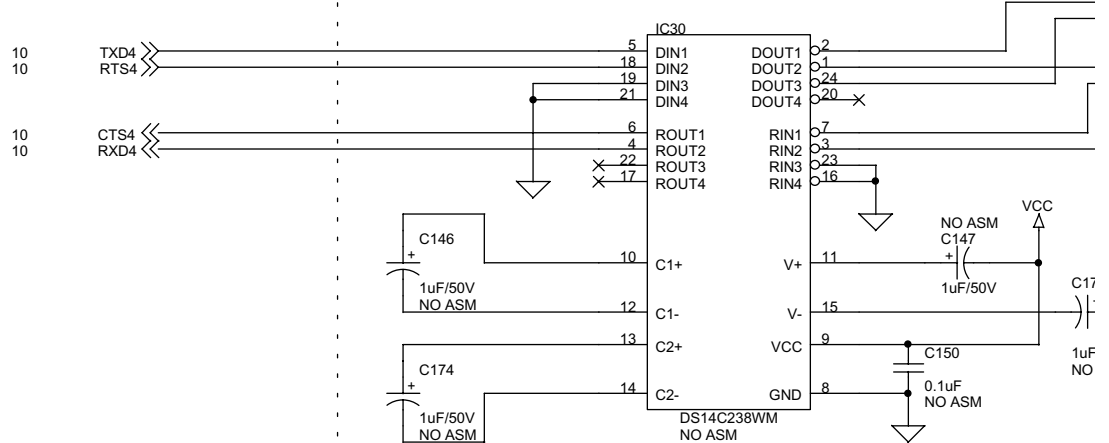


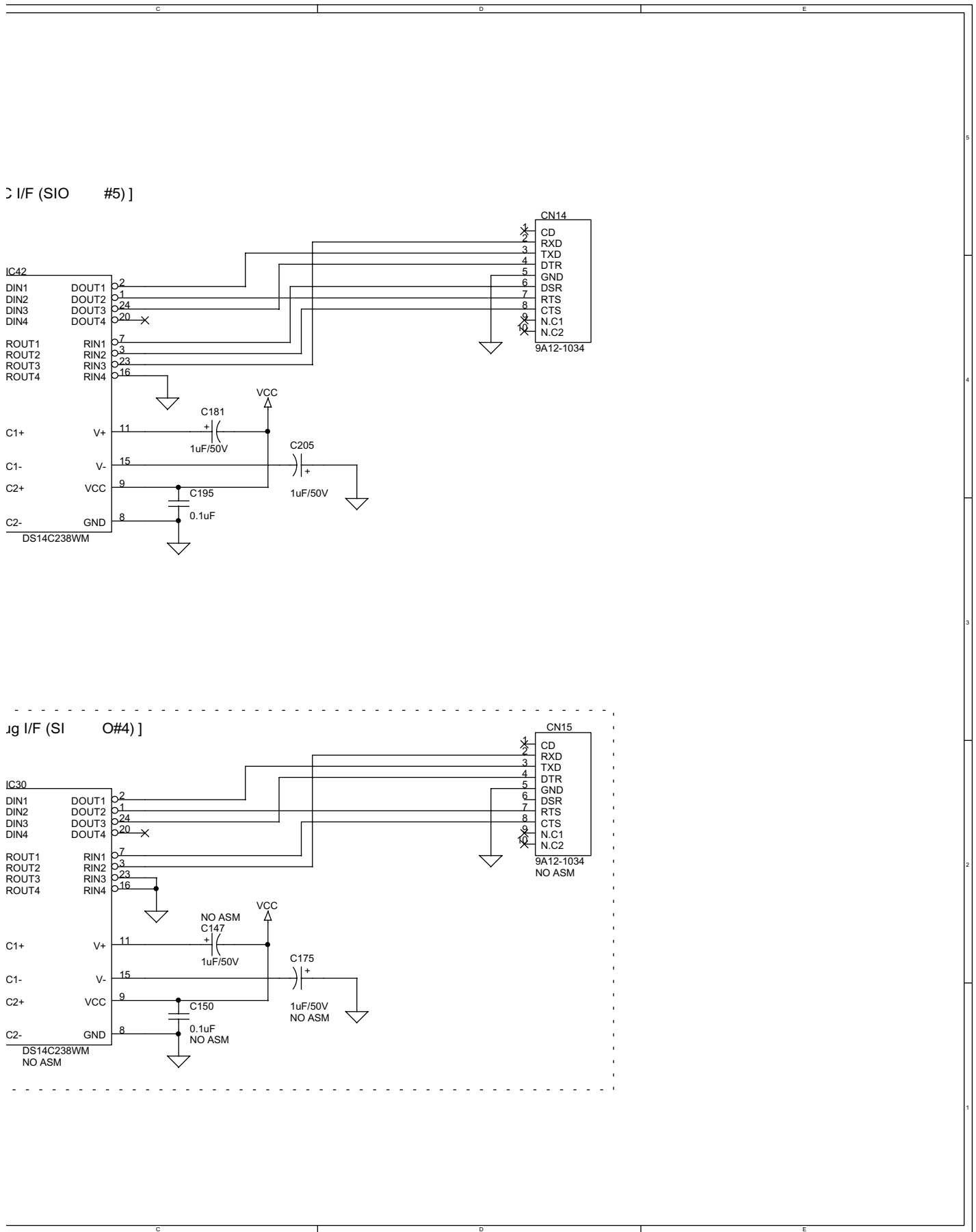
[SIO]

[RIC I/F (SIO #5)]

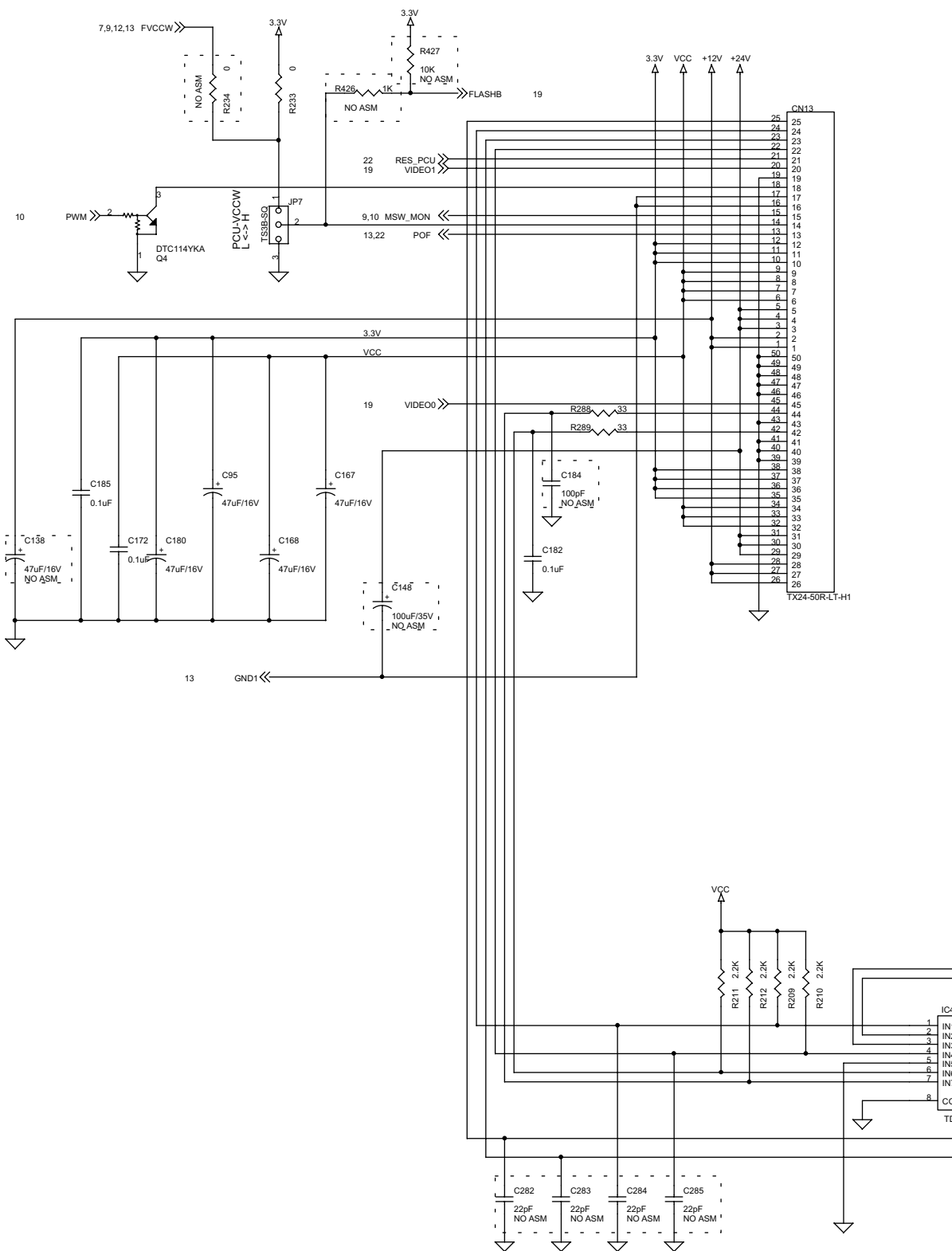


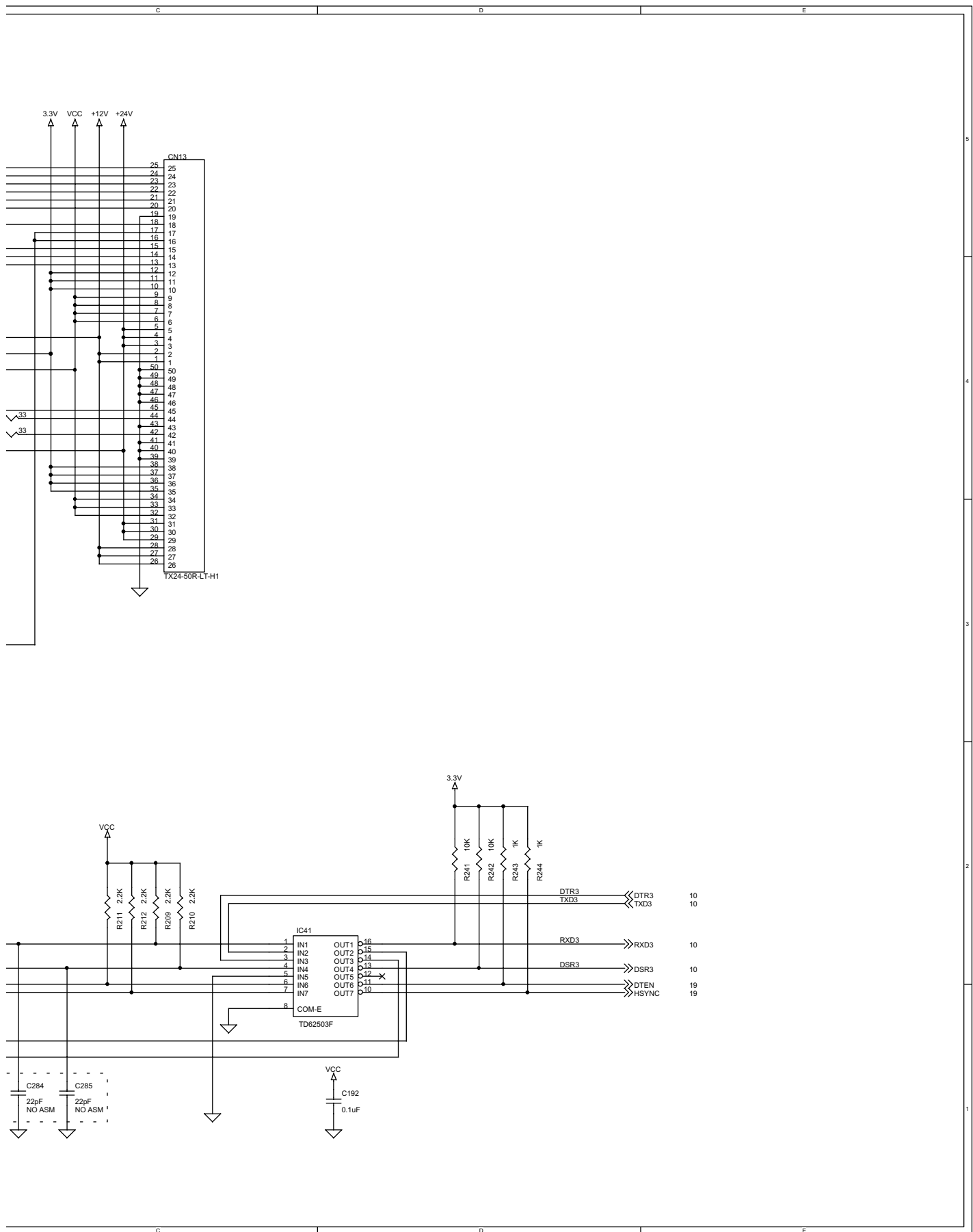
[Debug I/F (SIO #4)]



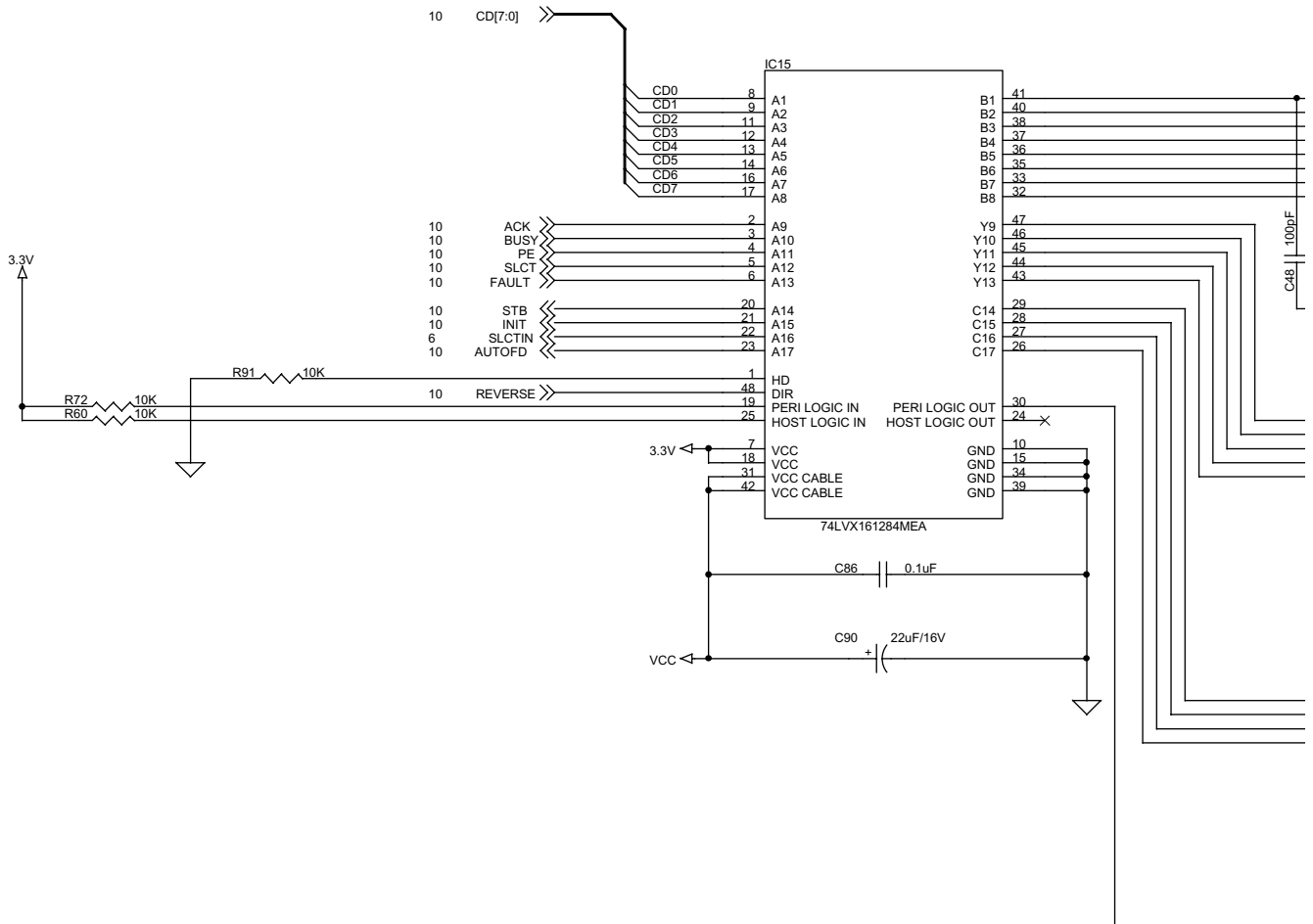


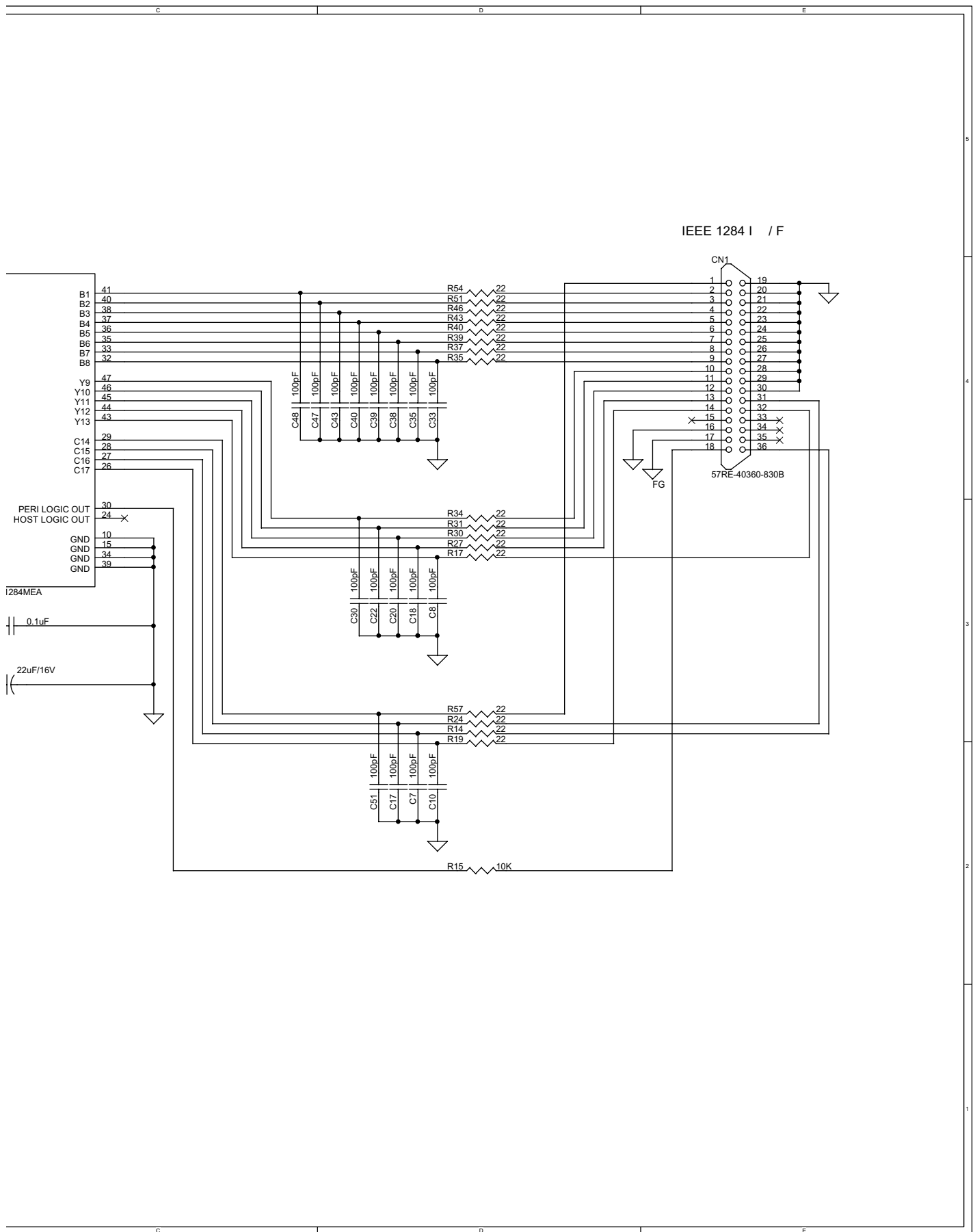
[ENGINE I/F CN]





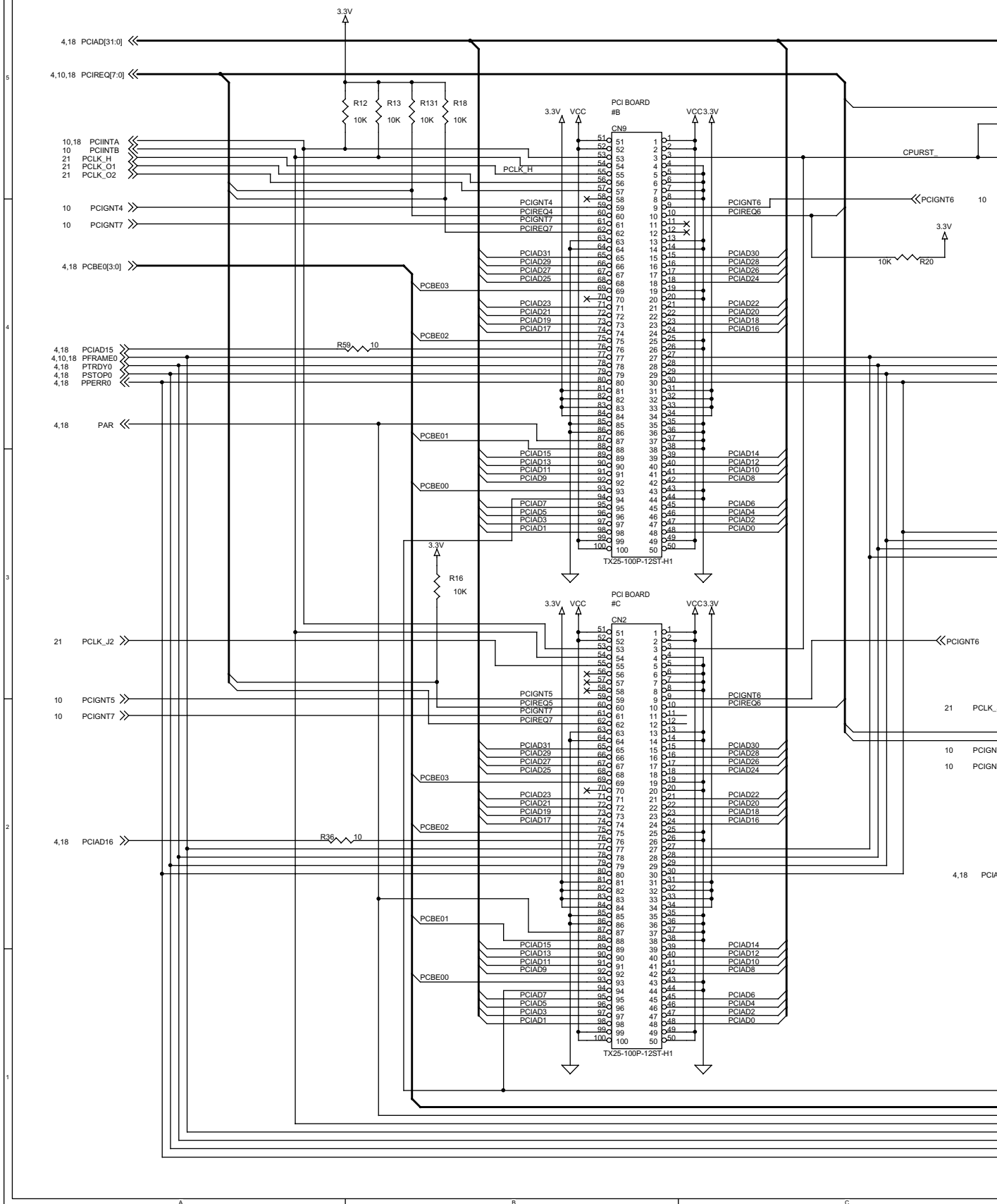
[IEEE1284 I/F]

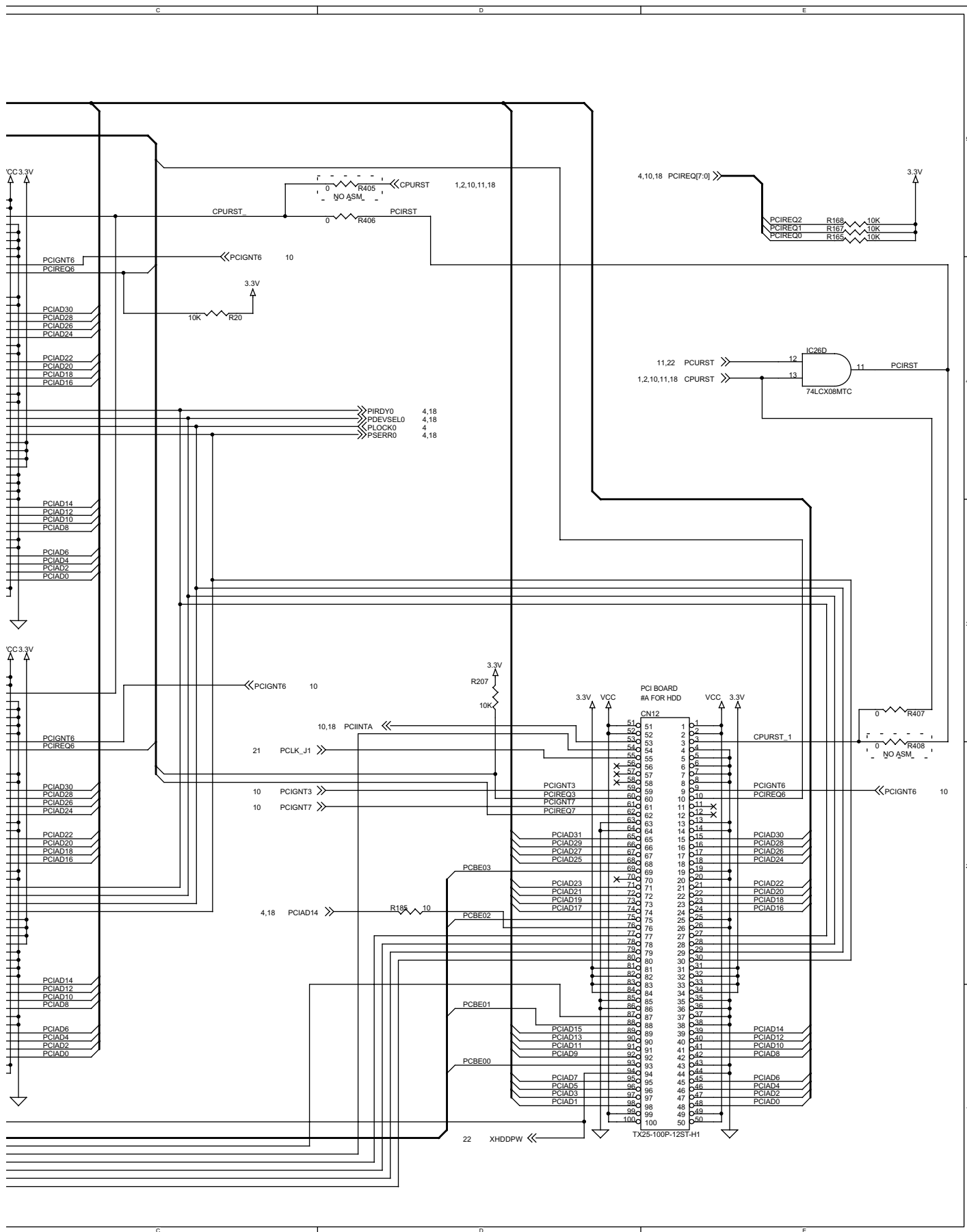




AR-M350U CIRCUIT DIAGRAM 9-39

[PCI BOARD CONNECTOR]





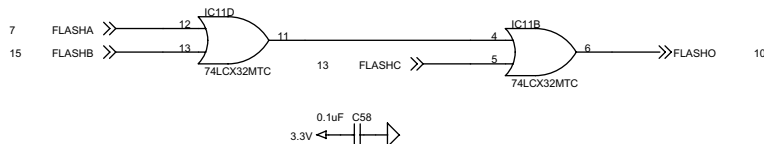
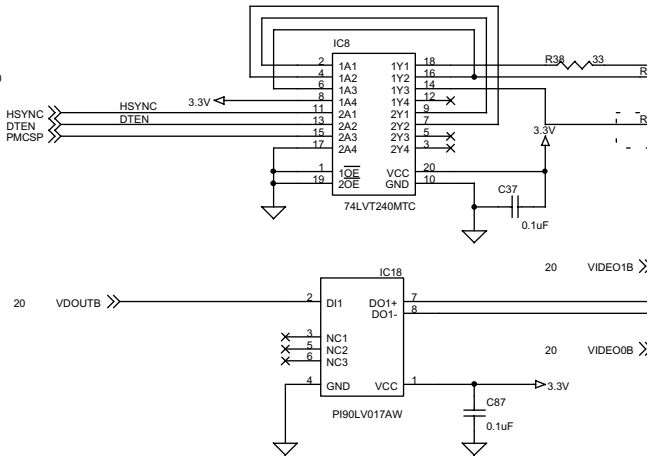
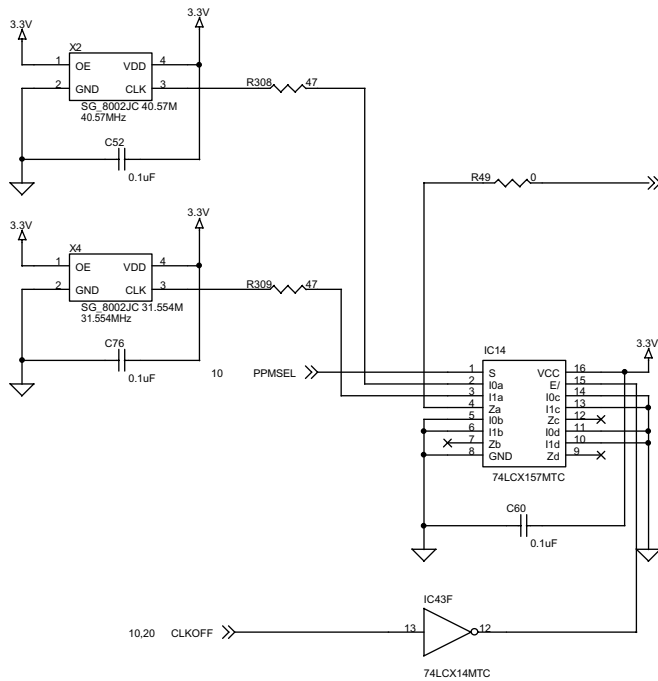
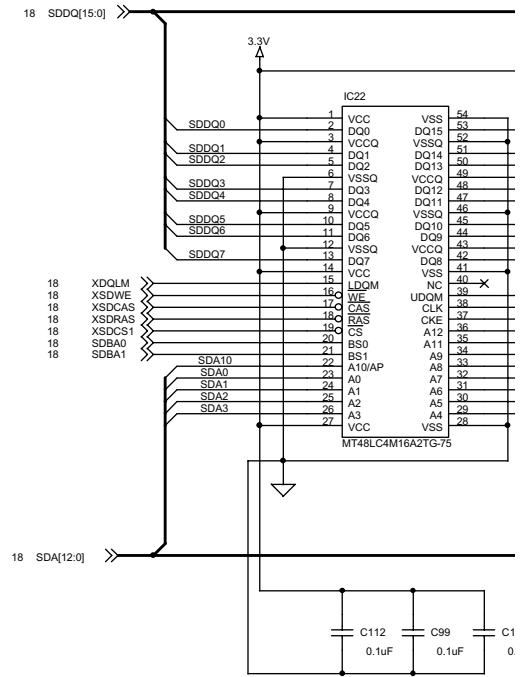
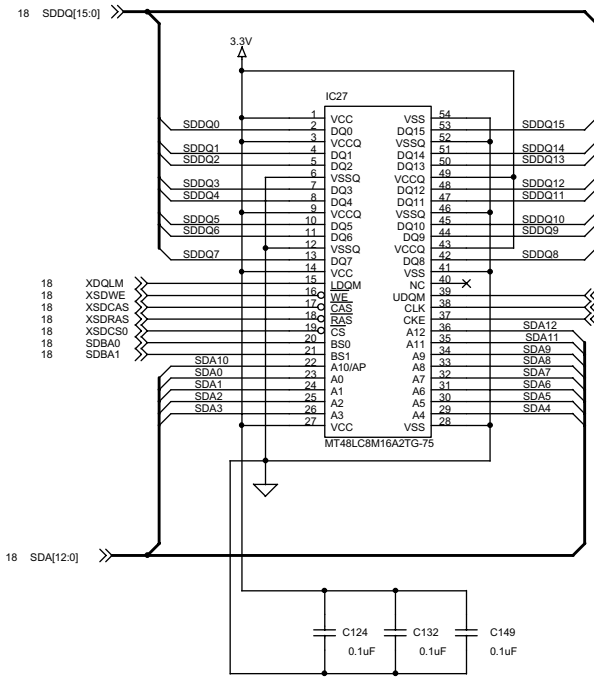
AR-M350U CIRCUIT DIAGRAM 9-41

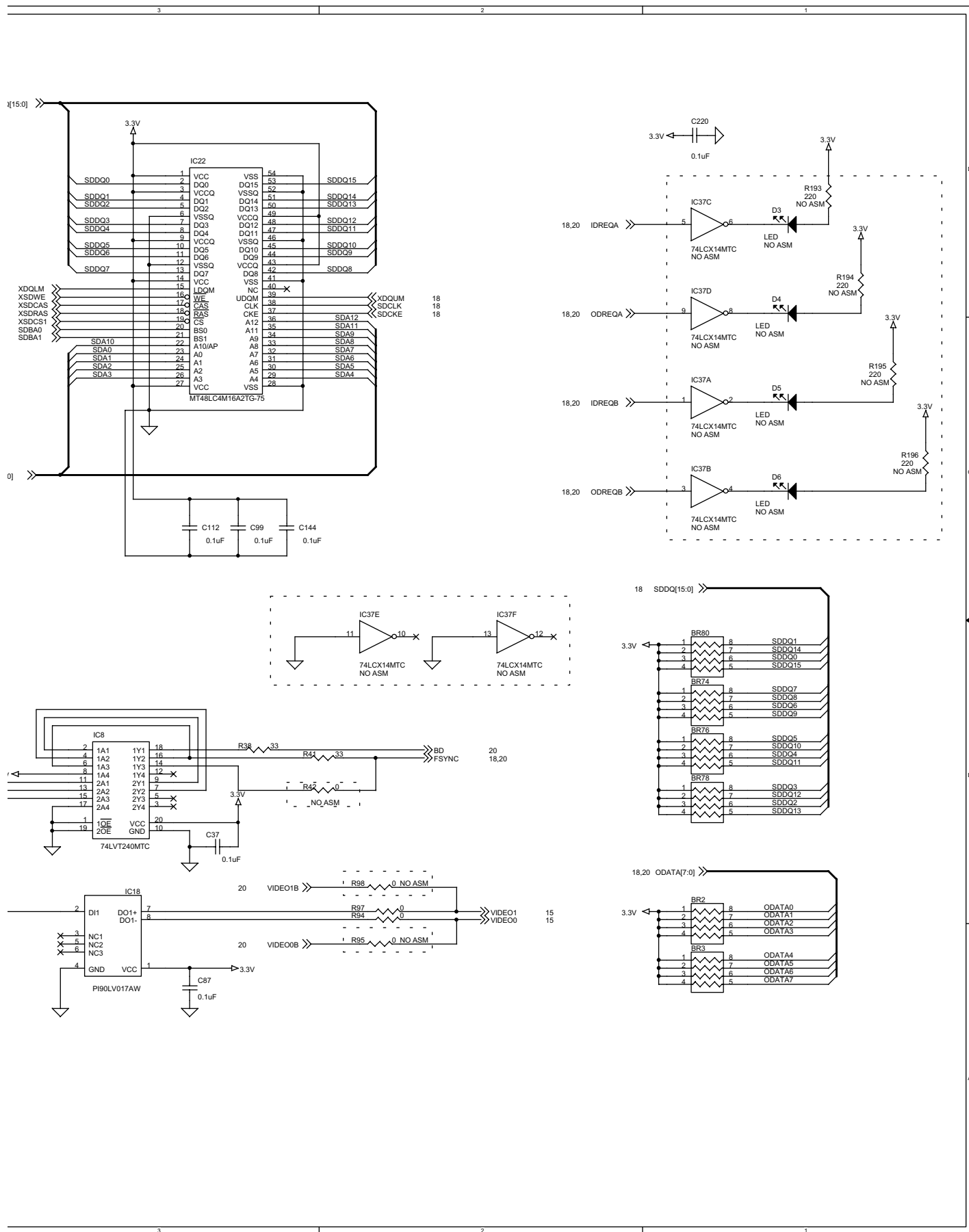
The diagram illustrates the PCB layout for the [ICU ASIC], showing the interconnection of various functional blocks and components. The layout is organized into several main sections:

- Top Section:** Contains the SDDQ7 through SDDQ15 signals, which are connected to the ASIC pins. It also shows the 3.3V power supply and the R169, R170, and R178 resistors.
- Left Section:** Features the 1-3pin: Pattern Short, the 1-CLK+ and 1-CLK- signals, and the 1-DATA0+, 1-DATA0-, 1-DATA1+, and 1-DATA1- signals. It includes resistors R183, R182, R181, and R180.
- Center Section:** Shows the IC25 (SC87J4810) and the IC46B (74LCX08MTC). The IC25 is connected to the SDDQ signals and the 3.3V supply. The IC46B is connected to the 1-CLK+ and 1-CLK- signals.
- Right Section:** Contains the SDRAM I/F, FRONT SCAN ASIC I/F, RET OR PM2500 I/O I/F, PM2-A CHANNEL 1 I/F, and PCI I/F. These sections show the connections to the SDRAM, scan ASIC, and PCI bus.
- Bottom Section:** Displays the power supply and ground connections, including the 3.3V supply, the 0.1uF capacitors (C235 through C262), and the 4.7K resistor (R231).

The layout is a detailed representation of the physical design, showing the placement of components, the routing of signals, and the connection to the ASIC pins. The components are labeled with their part numbers and values, and the signals are labeled with their names and pin numbers.

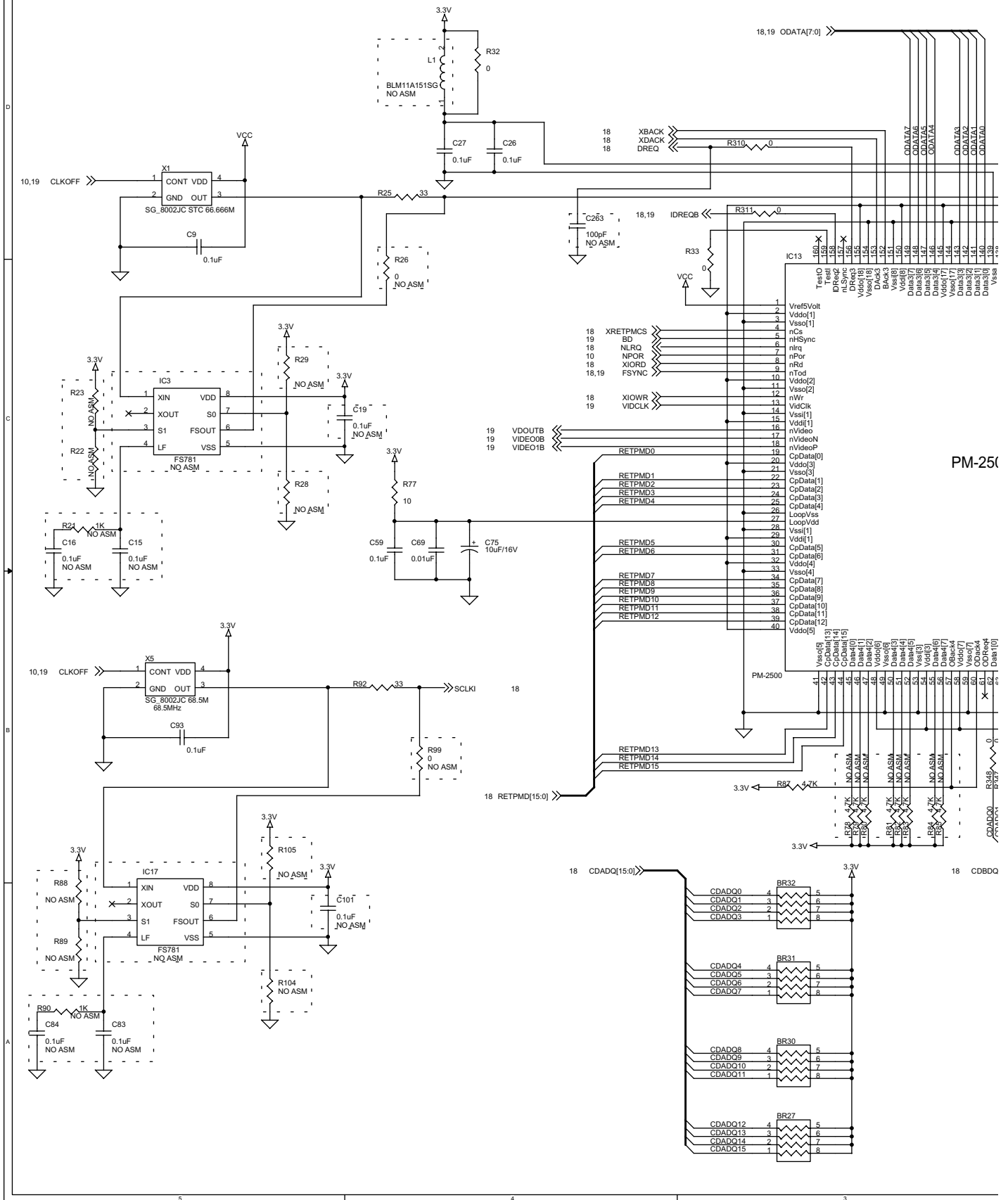
[ICU SDRAM]

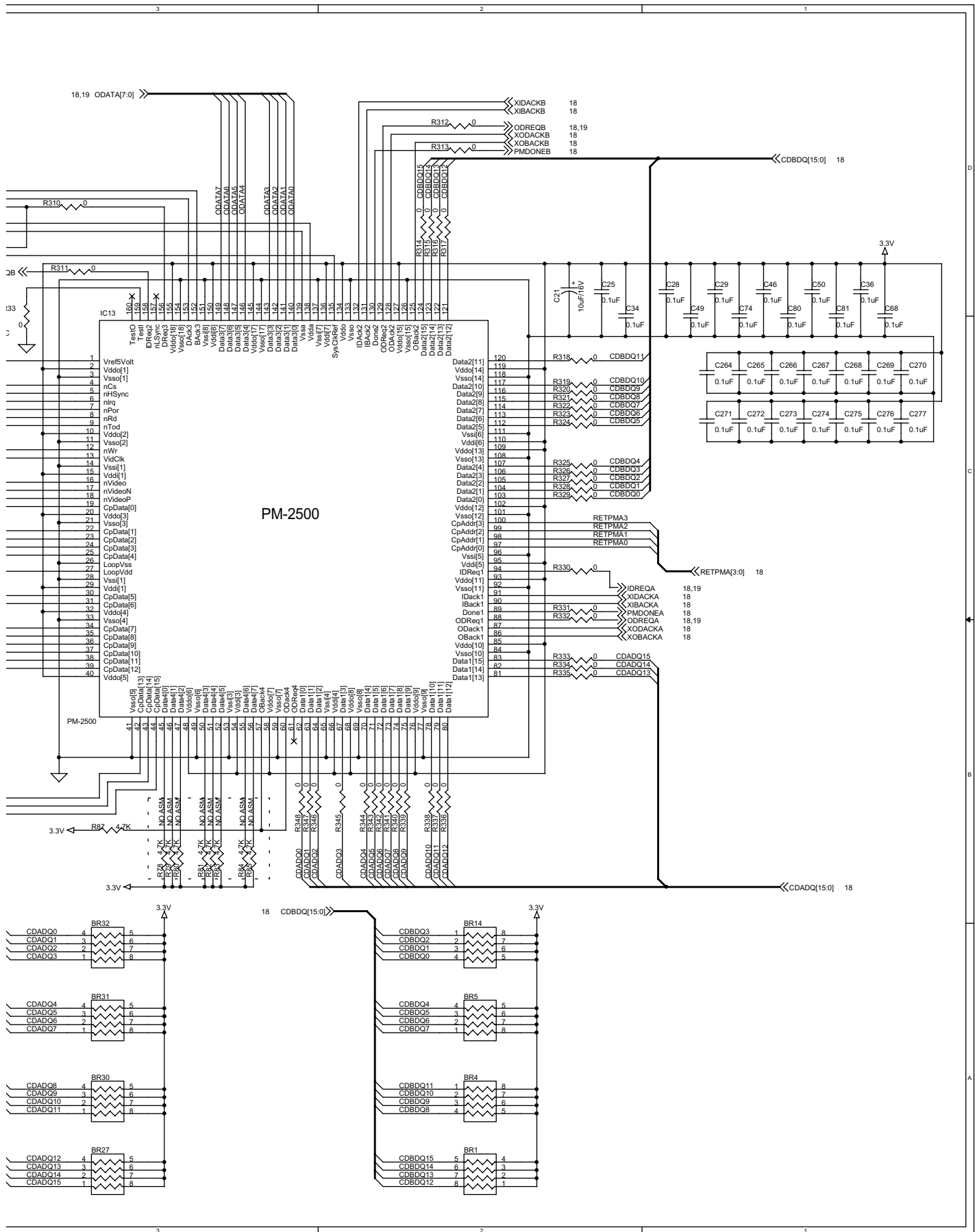




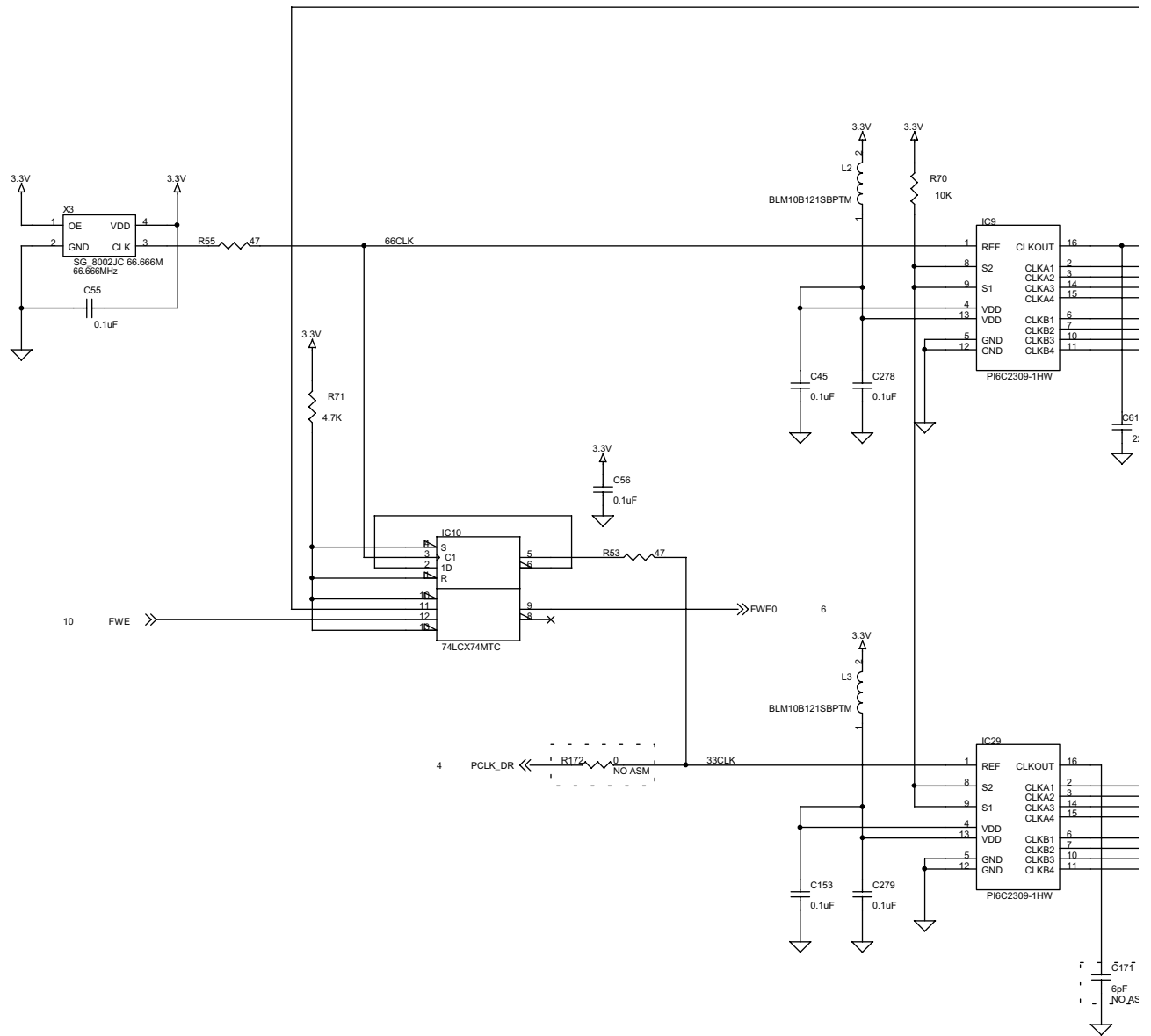
AR-M350U CIRCUIT DIAGRAM 9-45

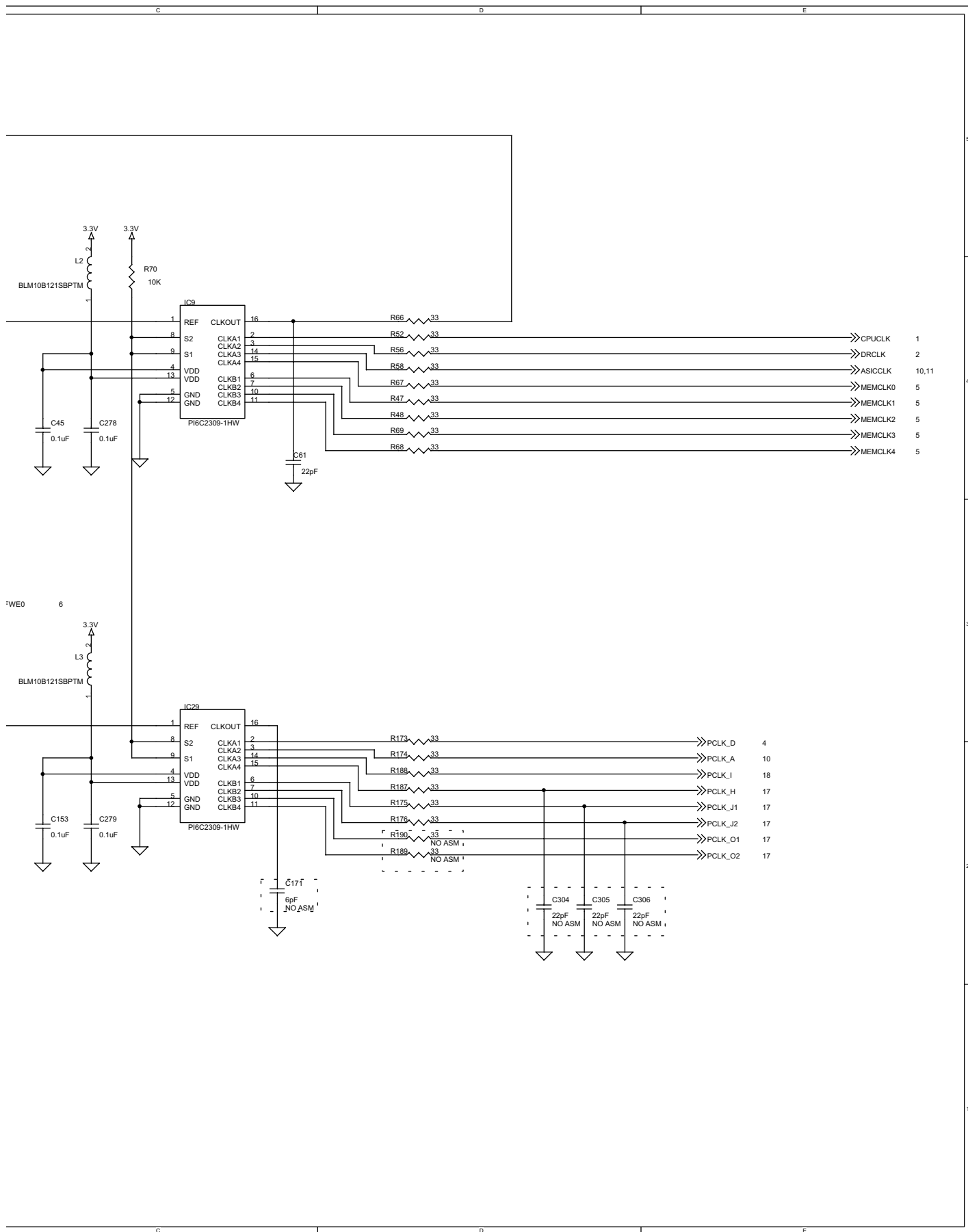
[PM-2500]



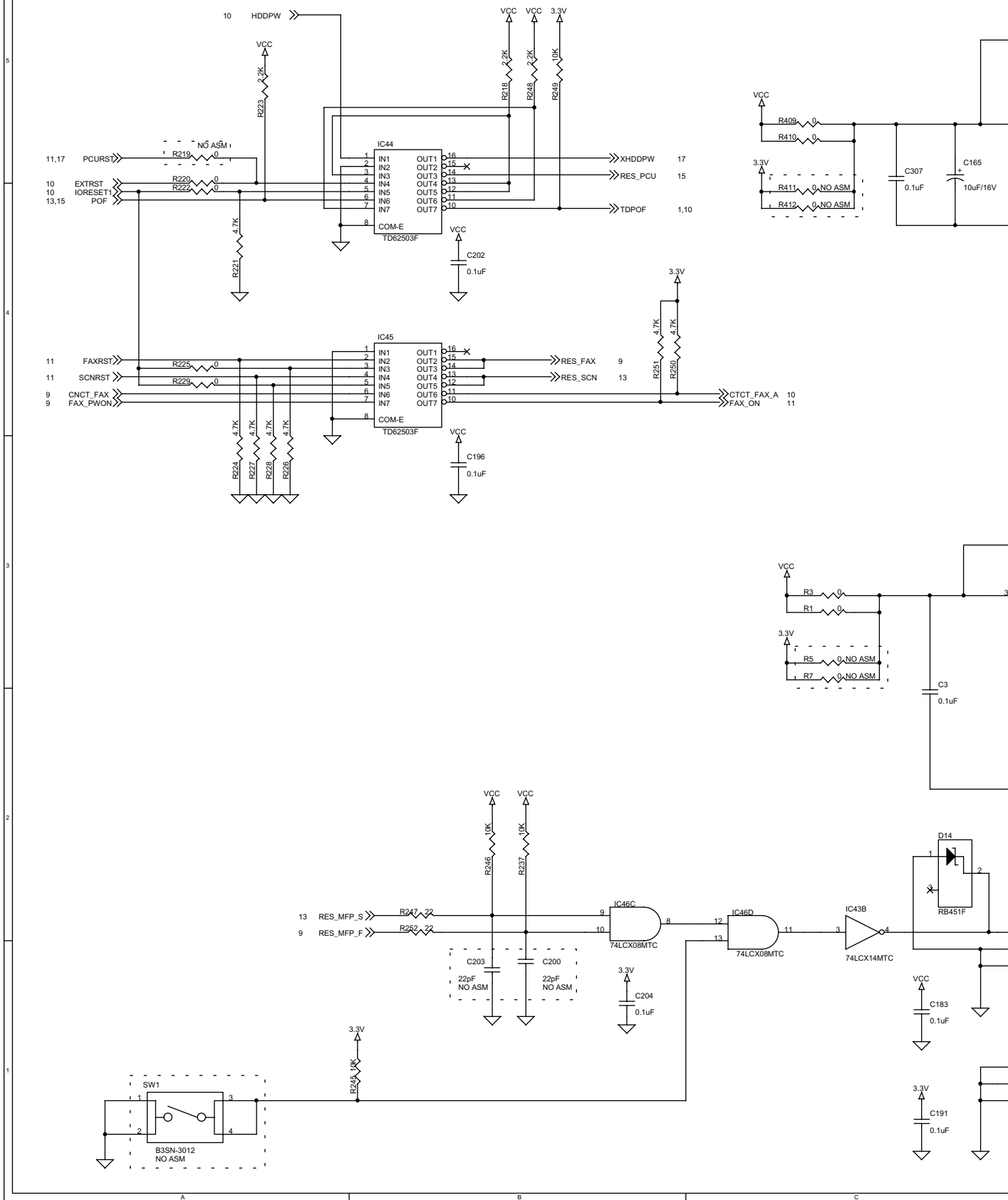


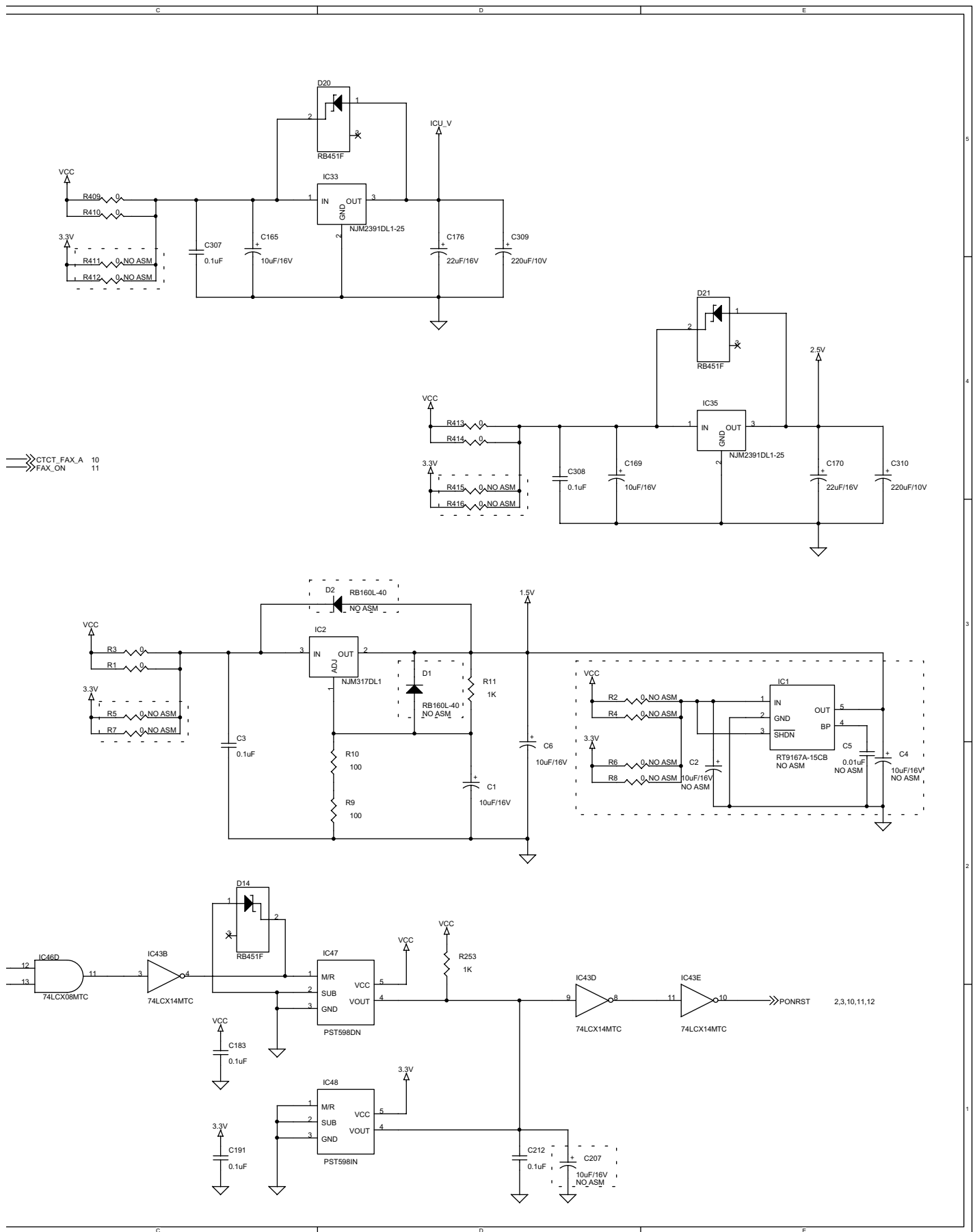
[CLOCK]





[RESET / POWER]





AR-M350U CIRCUIT DIAGRAM 9-51

CAUTION FOR BATTERY REPLACEMENT

- (Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.
- (English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.
- (Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.
- (French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.
- (Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.
- (German) Achtung
Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

- (For USA,CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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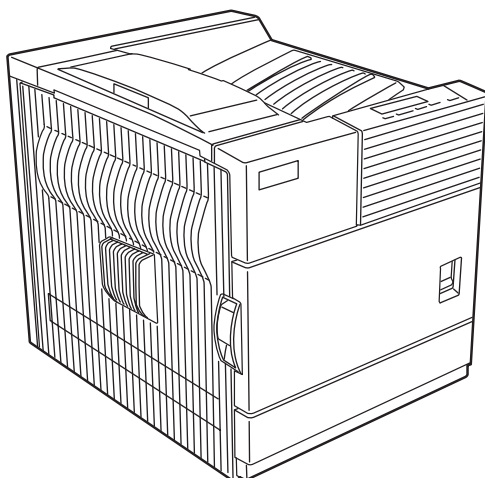
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Digital Document System Group
Products Quality Assurance Department
Yamatokoriyama, Nara 639-1186, Japan

2002 February Printed in Japan (N)

SHARP SERVICE MANUAL

CODE : 00ZARP350/A1E



LASER PRINTER

MODEL AR-P350
AR-P450

OPTIONS AR-HD3 / AR-PK1

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[11] TROUBLE CODES	11 - 1
[12] CIRCUIT DIAGRAM	12 - 1
[13] OTHERS	13 - 1

Parts marked with "▲" are important for maintaining the safety of the set.

Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CAUTION

This product is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH standard and IEC825. This means that this machine does not produce hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eye's retina, there is the danger of spot damage to the retina.

The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

- 1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not as individual parts.
- 2) Do not look into the machine with the main switch turned on after removing the developer unit, toner cartridge, and drum cartridge.
- 3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
- 4) The middle frame contains the safety interlock switch.
Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Warning!

This product is a class A product.

If it is operated in households, offices or similar surroundings, it can produce radio interferences at other appliances, so that the user has to take adequate countermeasures.

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING

OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

CAUTION

INVISIBLE LASER RADIATION,
WHEN OPEN AND INTERLOCKS DEFEATED. AVOID
EXPOSURE TO BEAM.

VORSICHT

UNSICHTBARE LASERSTRAHLUNG,
WENN ABDECKUNG GEÖFFNET UND
SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT
DEM STRAHL AUSSETZEN.

VARO !

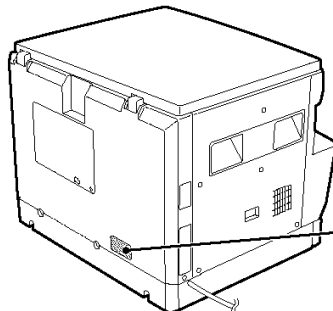
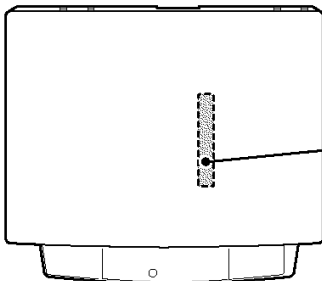
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET
ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ
KATSO SÄTEESEEN.

ADVARSEL

USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR
SIKKERHEDSBRYDERE ER UDE AF
FUNKTION. UNDGÅ UDSÆTTELSE FOR
STRÅLNING.

VARNING !

OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR
ÖPPNAD OCH SPÅRREN ÄR URKOPPLAD. BETRakta EJ
STRÅLEN. – STRÅLEN ÄR FARLIG.



Disconnect the AC cord before servicing the unit.

LASER WAVE LENGTH : 795 15 mm
Pulse times : 0.481 ms/6 mm
Out put power : 5 mW

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[1] GENERAL

1. Note for servicing

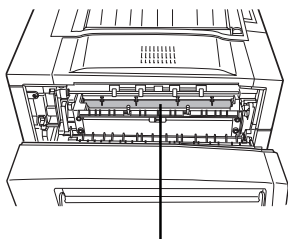
Pictogram

This Service Manual uses some pictographs to assure safe operation. Please understand the meanings of pictographs before servicing.

CAUTION: If this CAUTION is ignored, an injury or damage to property could occur.

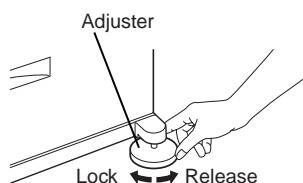
A.Cautions for servicing

- 1) Do not touch the photoconductive drum. Scratches or smudges on the drum will cause dirty printouts.
- 2) The fusing unit is extremely hot. Exercise care in this area.



Fusing unit

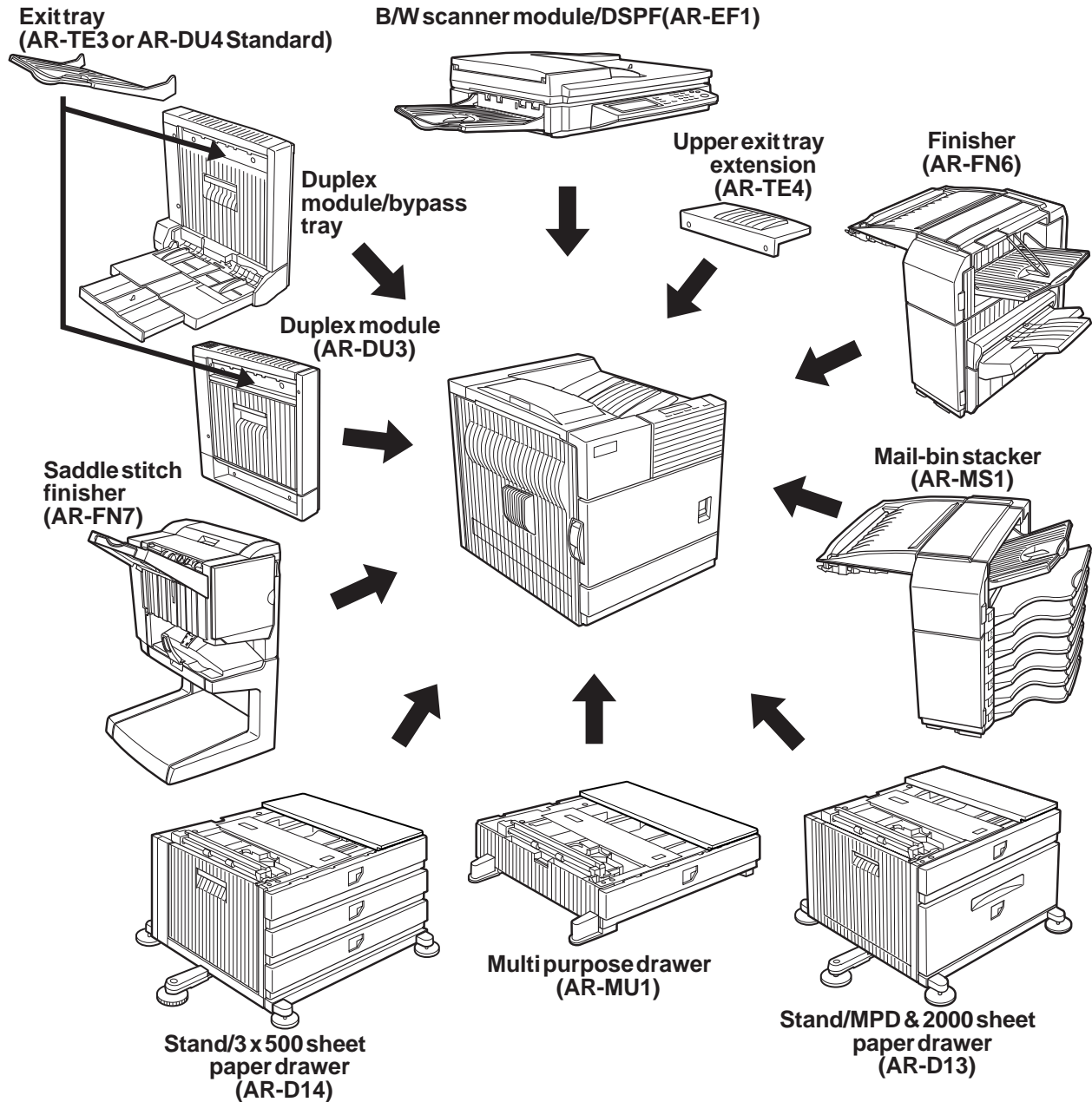
- 3) Do not look directly at the light source of the scanner module. Doing so may damage your eyes.
- 4) Five adjusters are provided on all optional stand/paper drawer units. These adjusters should be lowered until they contact the floor.



- 5) Do not make any modifications to this machine. Doing so may result in personal injury or damage to the machine.
- 6) Since this machine is heavy, it is recommended that it be moved by more than one person to prevent injury.
- 7) When connecting this machine to a computer, be sure to first turn both the computer and the machine off.
- 8) Do not print anything which is prohibited from printing by law. The following items are normally prohibited from printing by national law. Other items may be prohibited by local law.
 - Money
 - Stamps
 - Bonds
 - Stocks
 - Bank drafts
 - Checks
 - Passports
 - Driver's licenses
- 9) Do not throw toner or a toner cartridge into fire. Toner may be spattered, causing a burn.
- 10) Store toner or toner cartridges in a hard-to-reach place for children.

[2] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Such option has be ordered separately.)	Remarks
Printer model (35ppm)	AR-P350	<ul style="list-style-type: none"> Multi Purpose Drawer (AR-MU1), or Stand/MPD&2000 Sheet Paper Drawer (AR-D13), or Three paper drawer stand (AR-D14) Power Supply Unit (AR-DC1) is required for Stand/MPD&2000 Sheet Paper Drawer (AR-D13) and Three paper drawer stand (AR-D14) 	
Printer model (45ppm)	AR-P450		
MFP model (35ppm)	AR-M350	<ul style="list-style-type: none"> B/W Scanner module/DSPF (AR-EF1), or B/W Scanner module/SPF (AR-EF2) Scanner Rack (AR-RK1) Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14) Power supply unit (AR-DC1) 	
MFP model (45ppm)	AR-M450		

3. List of combination of peripheral devices

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

		B																								
A																										
	Related to scanner feature		B/W scanner module/DSPF	Scanner rack	Multi purpose drawer	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive			
	B/W scanner module/DSPF	AR-EF1	—	○	×	○ ^{*1}										○						○				
	Scanner rack	AR-RK1	○ ^{*1}	—	×	○ ^{*1}										○						○				
	Related to paper feed unit																									
	Multi purpose drawer	AR-MU1	×	×	—	×	×			×					×				×	×	×					
	Stand/3 x 500 sheet paper drawer	AR-D14			×	—	×															○				
	Stand/MPD & 2000 sheet paper drawer	AR-D13			×	×	—															○				
	Duplex module/bypass tray	AR-DU4				○ ^{*1}	—		×						×							○ ^{*2}				
	Duplex module	AR-DU3				○ ^{*1}	—															○ ^{*2}				
	Output units																									
	Saddle stitch finisher	AR-FN7			×	○ ^{*1}	×	○	—	×		×										○				
	Finisher	AR-FN6				○ ^{*1}				×	—	×		×	×							○				
	Mail-bin stacker	AR-MS1				○ ^{*1}				×	—		×									○				
	Exit tray	AR-TE3						○ ^{*1}	×	×	×	—		×												
	Upper exit tray extension	AR-TE4								×	×		—													
	Punch unit	AR-PN1			×	○ ^{*1}	×	○	○	×		×		—								○				
	Related to extension of functions and others																									
	PS3 expansion kit	AR-PK1																—								
	Network scanner expansion kit	AR-NS2	○ ^{*1}	○	×	○ ^{*1}										○	○		—							
	Facsimile expansion kit	AR-FX5	○ ^{*1}	○	×	○ ^{*1}										○				—						
	Fax memory (8 MB)	AR-MM9	○ ^{*1}	○	×	○ ^{*1}										○				○	—	○				
	Power supply unit	AR-DC1																				—				
	Hard disk drive	AR-HD3																					—			
	Multi-function controller board	AR-M11	○ ^{*1}	○	×	○ ^{*1}										—										
	Print server card	AR-NC5J															—									

○ = Must be installed together.

○^{*1} = Any of the units must be installed together.

○^{*2} = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.

×

[3] SPECIFICATIONS

1.Basic Specification

A.Base Engine

(1) Form

AR-P350 / AR-P450	Desktop
-------------------	---------

(2) Engine speed

Paper size	AR-P350	AR-P450
A4, 8.5" x 11"	35ppm	45ppm
A5R/5.5" x 8.5"R	35ppm	45ppm
B5	35ppm	45ppm
B4/8.5" x 14	20ppm	22ppm
A3/11" x 17"	17ppm	20ppm

(3) Engine composition

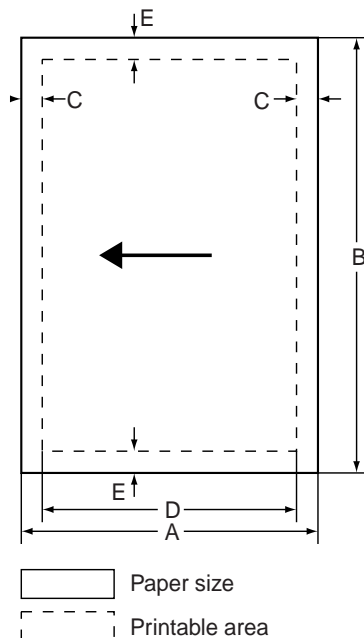
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Counter blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	Target: less than 95 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system	200V system
	100-127V	220-240V
Frequency	50/60Hz	50/60Hz
Power cord		

(8) Power consumption

	AR-P350	AR-P450
Max. Power consump.	1350W	1350W
Average waiting mode	1200W	1200W

(9) Energy Star benchmark

	AR-P350	AR-P450
Low power mode	40W	75W
Recovery time from low power mode	TBD	TBD
Sleep mode	-	-
Transition time to sleep mode	TBD	TBD

(10) Noise

	AR-P350	AR-P450
At working	TBD	TBD
At waiting mode	TBD	TBD
At sleep mode	TBD	TBD

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions	428 x 559 x 468.5 (WxDxH) (mm)
Occupied space dimensions	x (W x D) (mm)
Weight	Approx. 35 kg (excluded to Developer, Process, Controller unit)

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m ²)	
Media available for paper feeding	Plain paper 60 - 105g/m ² , 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/demounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m ² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11"R, 5.5" x 8.5"R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m ² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m ² / 16 ~ 34lbs Index paper : 176g/m ² / 47lbs Cover paper : 205g/m ² / 54 ~ 55lbs Transparency film : (TBD)
Remaining paper detection	Not provided
Exit tray full detection	Provided

2.Printer Function Specification

A. Platform

IBM PC/AT (Include compatible machine)
Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the AR-PK1 is required.

B. Support OS

Custom PS	Windows 95/98/Me
	Windows NT 4.0
	Windows 2000
	Mac OS 7.6 to Mac OS 9
Custom PCL5e/6(XL)	Windows 95/98/Me
	Windows NT 4.0
	Windows 2000
SPDL	Windows 95/98/Me
	Windows NT 4.0
	Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the AR-PK1 is required.

C. Support OS

PCL5e compatible, PCL6 compatible, PostScript Level 2 compatible, PostScript 3 compatible
--

D. ESC/P • ESC/P Super

Emulation	ESC/P(VP-1100), ESC/P Super
Embedded font	Japanese:Mincho, Gothic (bitmap) ANK:Roman, Sans Serif (bitmap)

E. Print Function

(1) General

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	N/N	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

(2) Paper input

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

(3) Paper output

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

(4) Graphic

When an optional PS3 expansion kit is installed				
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

(5) Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

(6) Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .

* 2 Functions when peripheral devices are installed.

* 3 Not supported in the Windows NT 4.0 environment.

* 4 2/4/6/9/16 is supported in the Windows 2000 environment.

* 5 Only one size is supported in the Windows 2000 environment.

* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.

* 7 This function is limited for PPD.

* 8 PCL6 only

F. Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJP commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJP commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.
ESC/P and ESC/P Super compatibility	Target for ESC/P and ESC/P Super is to be compatible with Epson VP-1100. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

3.Expanded RAM

Installation of an expanded RAM will avoid the following status.

- 1) Time out error reduction
- 2) Spool time reduction
- 3)

Use a commercially available RAM of the following specifications.

If a RAM which does not meet the specifications is installed, it may cause a trouble such as that it is not recognized or its capacity is not correctly recognized.

<Spesification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

[4] CONSUMABLE PARTS

1. Supply system table

A. USA

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450MT (*1 AR-450MT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450ND	
3	Drum	Drum x1	50K	AR-450DR	
4	100K maintenance kit	Cleaner blade x1 Drum separation pawl x4	100K	AR-450KA1	
5	Transfer roller kit	Transfer roller x1 Transfer charging plate x2	100K	AR-450TX	
6	Upper heat roller kit	Upper heat roller x1 Fusing separation pawl (Upper) x4	200K	AR-450UH	
7	Lower heat roller kit	Lower heat roller x1 Fusing separation pawl (Lower) x2	100K	AR-450LH	
8	Cleaner blade	Cleaner blade x10	100K(x10)	AR-450CB	AR-450CB=(AR-450BL)x10
9	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
10	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

B. CANADA/Latin America

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450MT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450ND	
3	Drum	Drum x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

C.Europe/Australia/New Zealand

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450LT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450DV	
3	Drum	Drum x1	50K	AR-450DM	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

D.Middle East/ Africa

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450ET	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450SD	
3	Drum	Drum x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x1 Fusing separation pawl (Lower) x1	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

E.Israel/Russia/CIS/Philippines

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450ET	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450SD	
3	Drum	Drum x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

F.Asia

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450CT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450SD	
3	Drum	Drum x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x1 Fusing separation pawl (Lower) x1	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

G.Hong kong/China

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450CT-C	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450SD-C	
3	Drum	Drum x1	50K	AR-450DR-C	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:2 languages (English/Chinese).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

H.Taiwan

NO	Name	Content	Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)	30K	AR-450ST-T	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)	100K	AR-450SD-C	
3	Drum	Drum x1	50K	AR-450DR-C	
4	100K PM kit	Cleaner blade x1 Screen grid x1 Toner reception seal x1 Side mall each x1 DV blade x1 DV side seal each x1 Transfer roller x1 Transfer charging plate x1 Charging plate x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller x1 Lower heat roller x1 Fusing separation pawl (Upper) x4 Fusing separation pawl (Lower) x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

2. Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

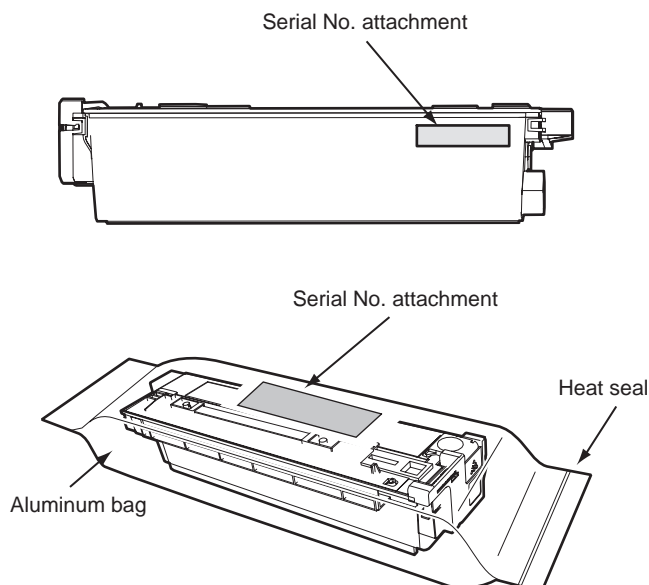
- 1 Number
For this model, this digit is 2.
- 2 Alphabet
Indicates the model conformity code. T for this model.
- 3 Number
Indicates the end digit of the production year.
- 4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
- 5/6 Number
Indicates the production day on the month.
- 7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
- 8/9 Number
Indicates the day of the month of packing.
- 10 Alphabet
Indicates the production factory. "A" for Nara Plant.

B. Toner cartridge

The lot number is of 7 digits, and each digit indicates as follows.
The lot number shall be printed in the position shown in the figure.

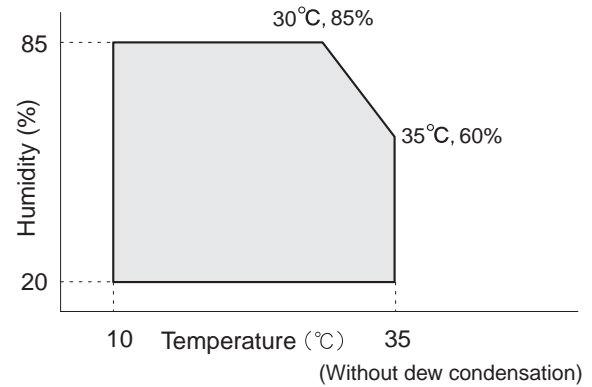
1	2	3	4	5	6	7
---	---	---	---	---	---	---

- 1 Version number (A - sequentially revised)
- 2 Numeral figure
Indicates the end digit of the production year.
- 3 Alphabet
Indicates the production factory. (B for SOCC)
- 4 Destination code
- 5,6 Numeral figures
Indicates the production day.
- 7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.

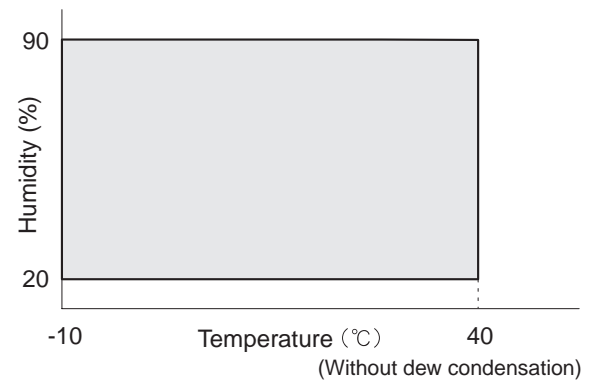


3. Environmental conditions

A. Operating conditions

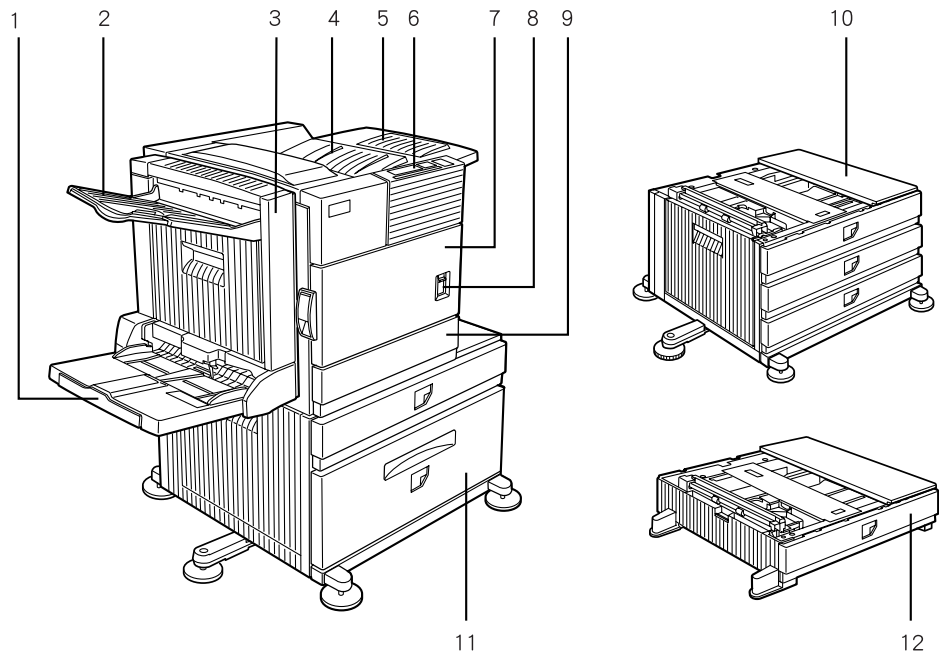


B. Storage conditions



[5] EXTERNAL VIEWS AND INTERNAL STRUCTURES

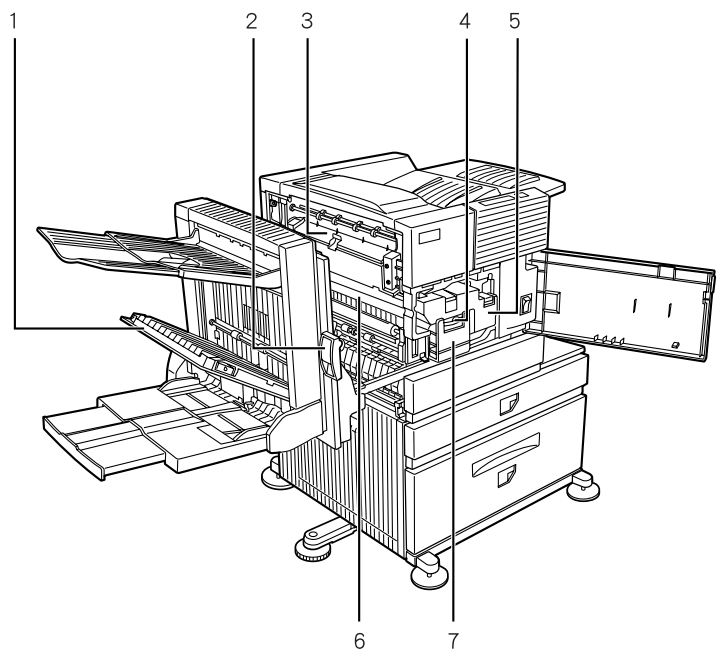
1.Appearance



1	Bypass tray	*	2	Exit tray	*	3	Duplex module	*
4	Upper paper output area		5	Upper exit tray extension	*	6	Operation panel	
7	Front cover		8	Main switch		9	Paper tray 1	
10	Stand / 3 x 500 sheet paper drawer	*	11	Stand / MPD & 2000 sheet paper drawer	*	12	Multi purpose drawer	*

* 1, 2, 3, 5, 10, 11, and 12 are peripheral units. The configuration of peripheral units varies with the main unit model.

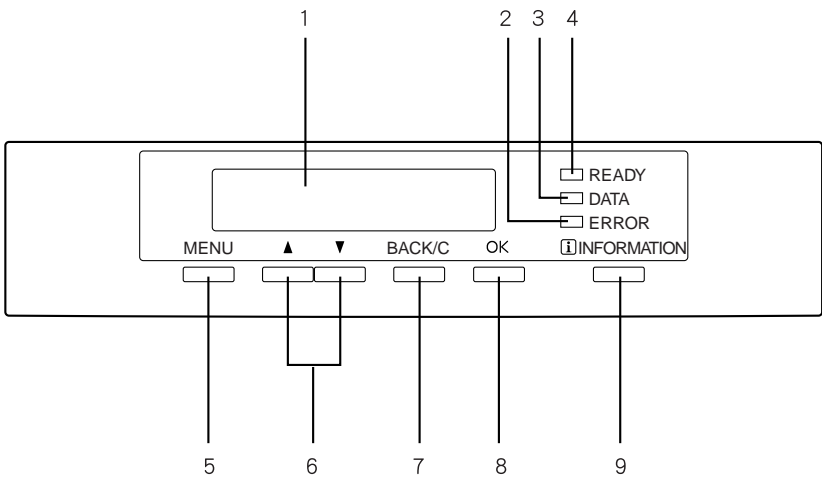
2.Internal



1	Duplex module side cover	2	Side cover open knob	3	Fusing unit
4	Developer cartridge	5	Toner cartridge	6	Photoconductive drum
7	Cartridge lock lever				

3.Operation panel

* This operation panel is valid only when a scanner unit is not installed.



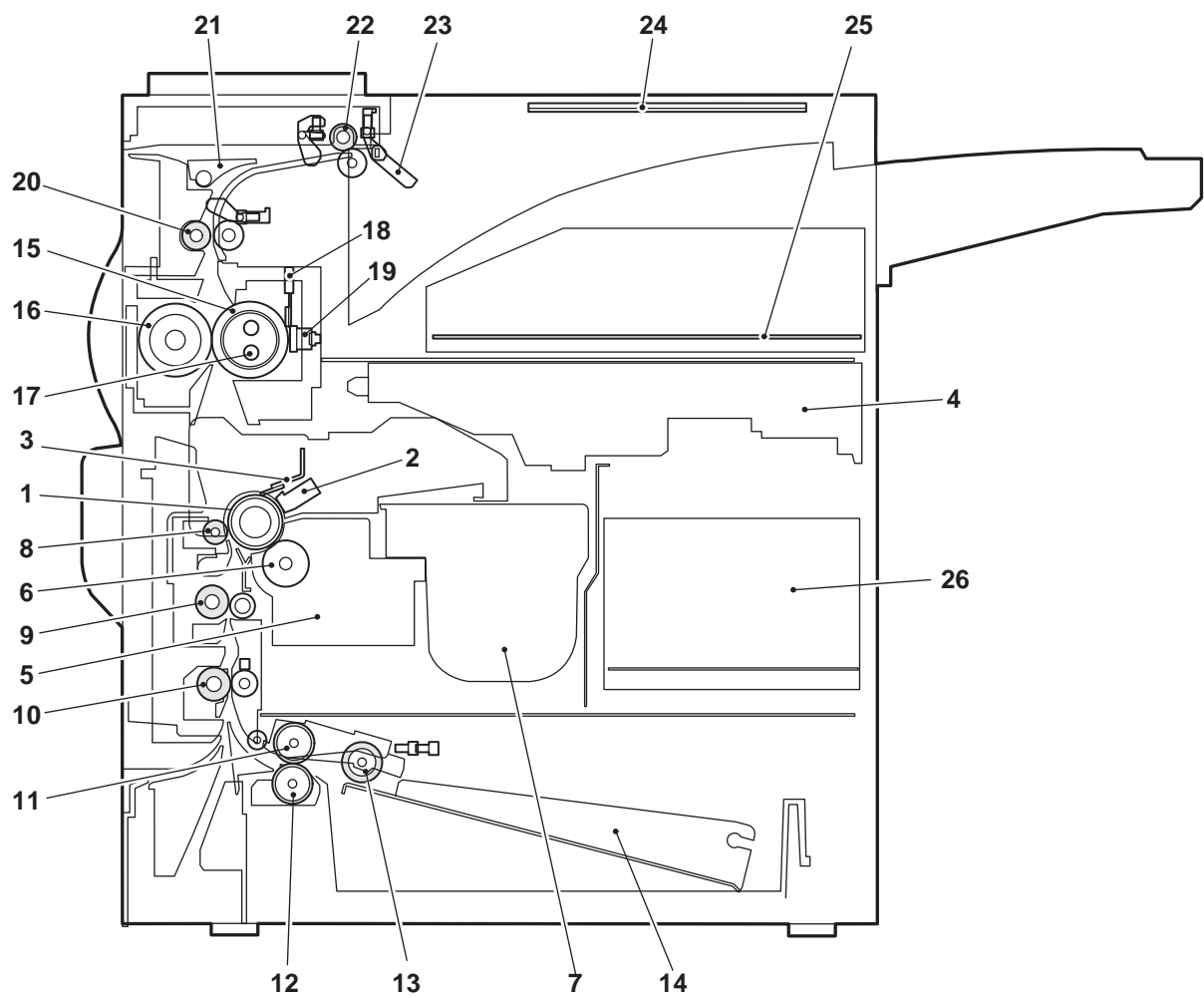
1	Message display	2	[ERROR] indicator	3	[DATA] indicator
4	[READY] indicator	5	[MENU] key	6	[▲/▼] keys
7	[BACK/C] key	8	[OK] key	9	[INFORMATION] key

<Function of each LED>

	READY	DATA	ERROR
ON	Print job reception enable	•When RIP-completed print data are stored in memory.	•When a trouble which can be canceled by the user occurred.
Flash		•When data are processed in the printer board (during RIP).	•When a trouble which requires service call occurred.
OFF	Print job reception disable	•Neither print data nor data under process are stored.	•No trouble

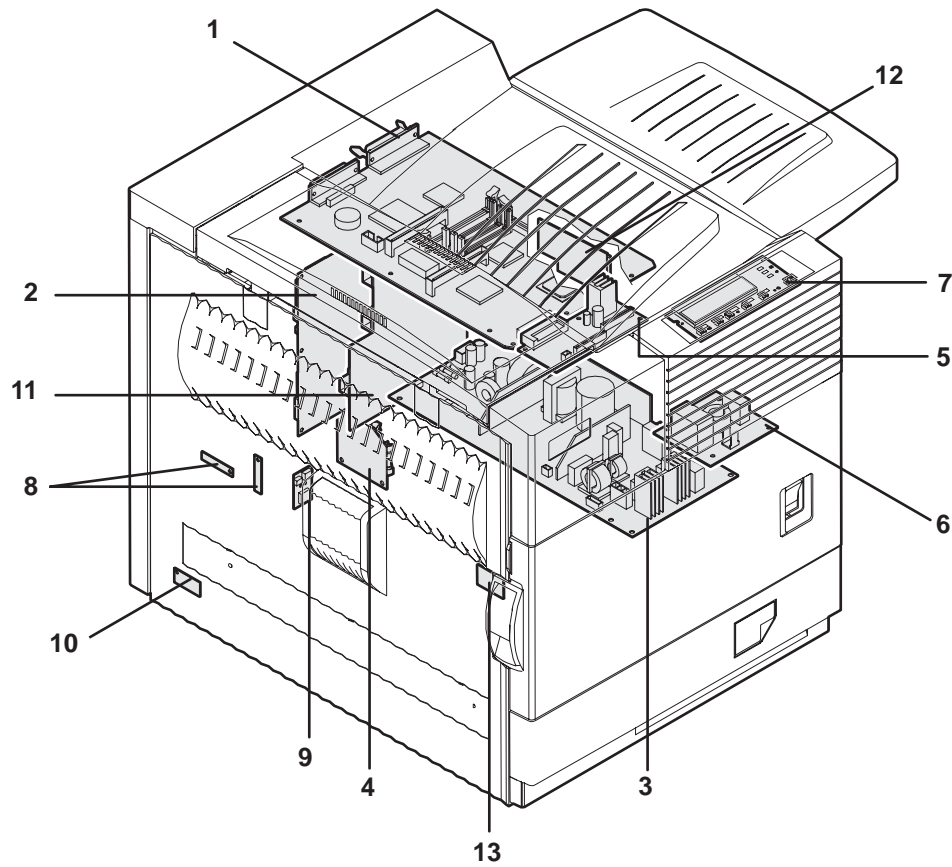
* RIP:Raster In Processor. Develops the print command into pixel information.

4. Cross sectional view



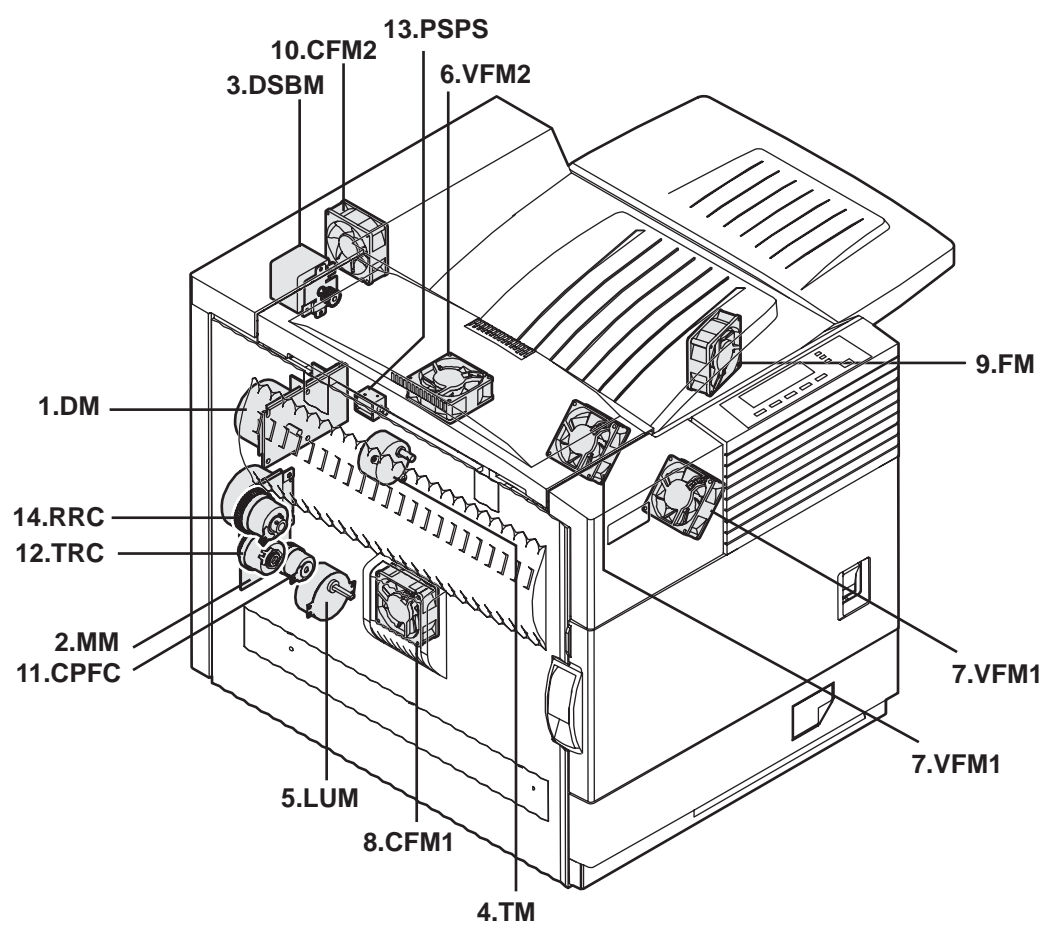
No.	Name	No.	Name
1	OPC drum	15	Upper heat roller
2	Main charger	16	Pressure roller
3	Cleaning blade	17	Heater roller
4	LSU	18	Thermistor
5	Developing unit	19	Thermostat
6	Magnet roller	20	Fusing back roller
7	Toner hopper	21	Reverse gate
8	Transfer roller	22	Paper exit roller
9	PS roller	23	Full detection lever
10	PS front roller	24	Printer operation PWB
11	Machine tray paper feed roller	25	Printer control PWB
12	Machine tray separation roller	26	Power unit
13	Machine tray take-up roller		
14	Machine tray rotating plate		

5. PWB



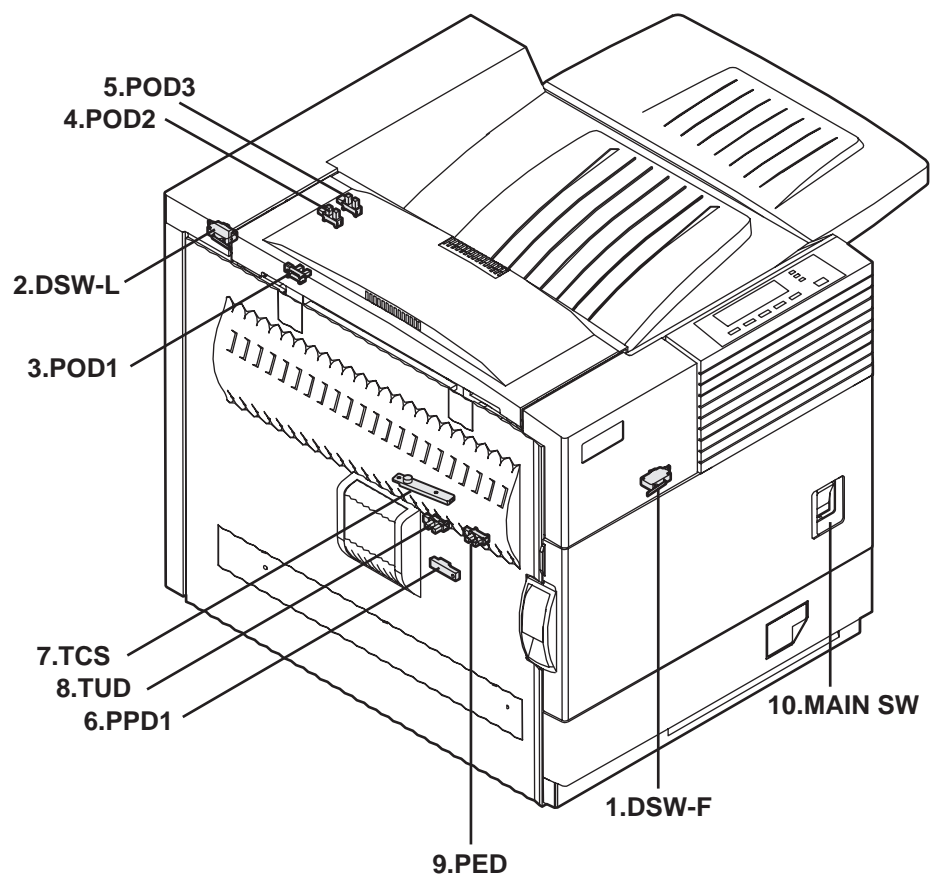
	Name	Function/Operation
1	PRT controller	Image process, image data communication control
2	PCU PWB	Overall control of the machine and options
3	Power unit	DC power supply
4	LD PWB (Inside LSU)	Laser ON control (Inside LSU: LSU cannot be disassembled.)
5	Mother PWB	Signal interface between PCU and the controller
6	Filter PWB	AC power input
7	Printer operation PWB	Key input, machine state display
8	High voltage resistor PWB	High voltage load adjustment
9	Cassette detection PWB	Paper cassette control
10	Drawer PWB	Fan control
11	High voltage PWB	High voltage power supply
12	Fuse PWB	Protection of the machine when an abnormal power is supplied.
13	Initial detection PWB (in the developing unit)	New toner cartridge detection

6. Motor, Clutch, Solenoid



	Code	Function/Operation	Type
1	DM	Drum motor	Brushless motor
2	MM	Main motor	Brushless motor
3	DSBM	Paper exit motor	Stepping motor
4	TM	Toner motor	Synchronous motor
5	LUM	Lift-up motor	Synchronous motor
6	VFM2	Exhaust fan motor	Fan motor
7	VFM1	Cooling fan motor	Fan motor
8	CFM1	Cooling fan motor	Fan motor
9	FM	Fan motor	Fan motor
10	CFM2	Cooling fan motor	Fan motor
11	CPFC	Paper cassette paper feed clutch	
12	TRC	Paper transport clutch	
13	PSPS	Separation solenoid	
14	RRC	Resist roller clutch	

7. Switch, Sensor



	Code	Function/Operation	Active logic
1	DSW-F	Front door open/close detection	H= Door open
2	DSW-L	Left door open/close detection	H=Door open
3	POD1	Paper exit detection	L= Paper detection
4	POD2	Paper exit detection	L= Paper detection
5	POD3	Paper exit detection	L= Paper detection
6	PPD1	Paper transport detection	L= Paper detection
7	TCS	Toner concentration sensor	
8	TUD	Paper feed cassette upper limit detection	H= Upper limit detection
9	PED	Paper feed cassette paper empty detection	L= Paper empty detection
10	MAIN SW	Power switch	

[6] UNPACKING AND INSTALLATION

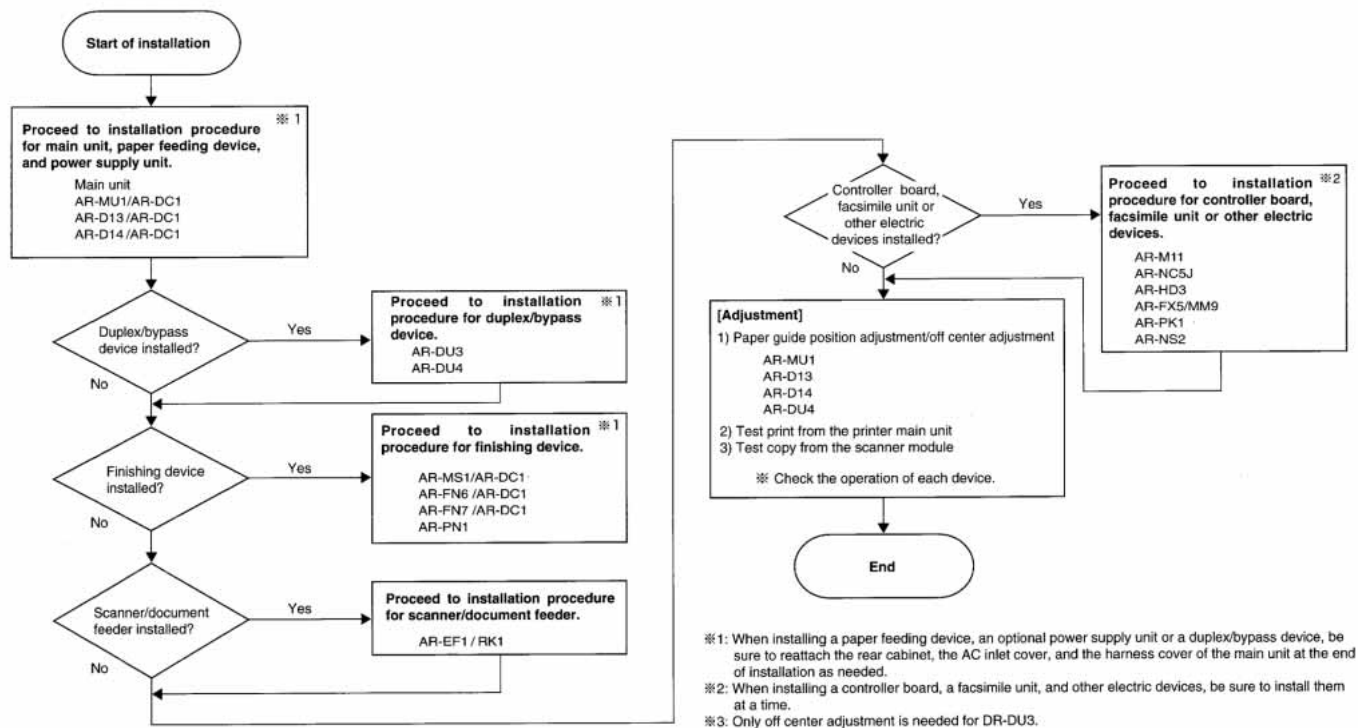
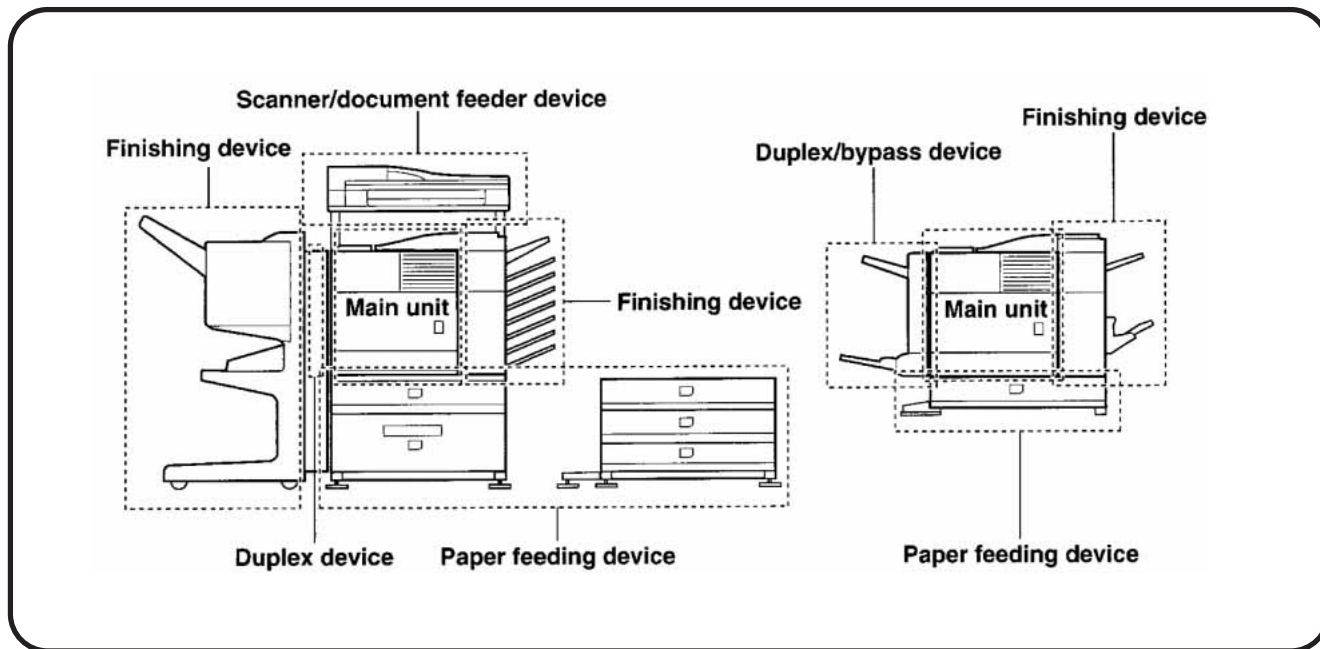
1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.

Some peripheral devices may have been installed as standard devices depending on the main unit model.

Part of descriptions and illustrations may be different.

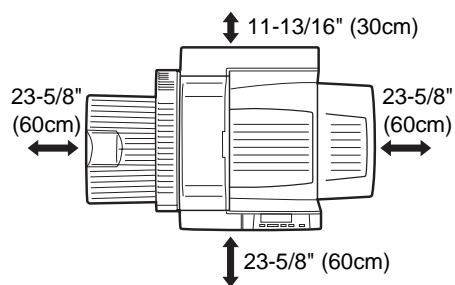


* For installation of an option unit, refer to the Service Manual of the option unit.

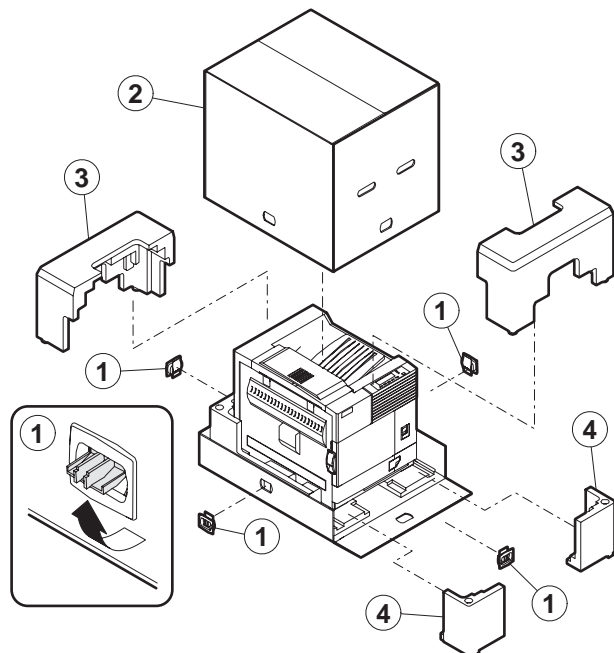
2. Note for installation place

Improper installation may damage this product. Please note the following during initial installation and whenever the machine is moved.

- 1) The machine should be installed near an accessible power outlet for easy connection.
- 2) Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.
 - For the power supply requirements, see the name plate of the main unit.
- 3) Do not install your machine in areas that are:
 - damp, humid, or very dusty
 - exposed to direct sunlight
 - poorly ventilated
 - subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.
- 4) Be sure to allow the required space around the machine for servicing and proper ventilation.



3.Unpacking procedure



Check the following items are included in the package.

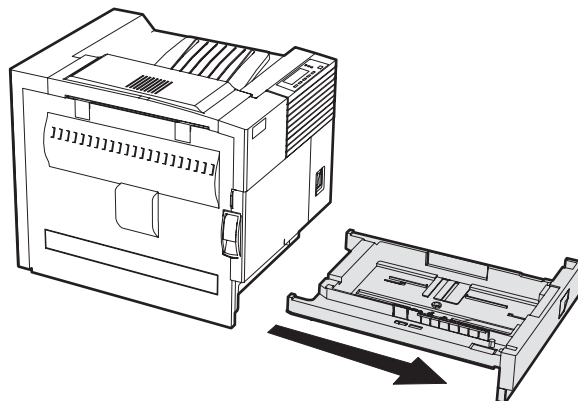
Dust cover	
Magnification ratio table	
Paper size indication seal	
Developer	
Toner bottle for installation	
CD-ROM for AR-350/450 series printers	
Operating Manual	
Counter kit contract	

4. Machine installing procedure

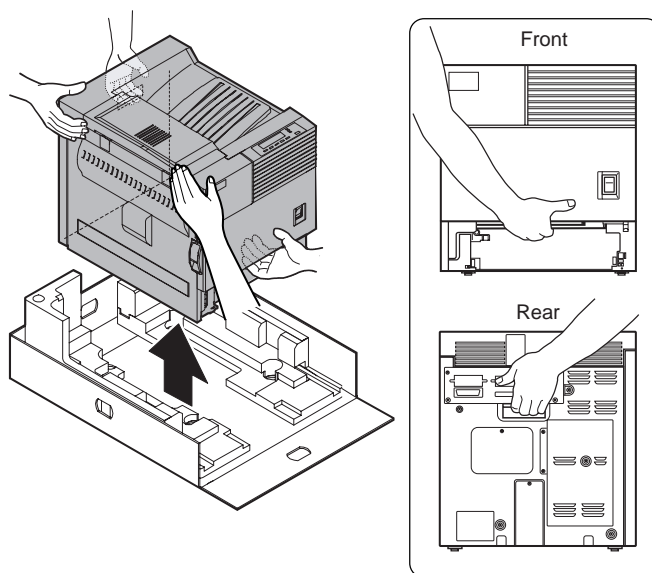
Note: In advance to installation of the machine, the paper feed option units (AR-MU1, AR-D13 or AR-D14) should have been installed.

A. Removal of the machine

- 1) Pull out the front tray and remove it from the machine.



- 2) Hold the machine with your both hands and remove it from the package box as shown in the figure.



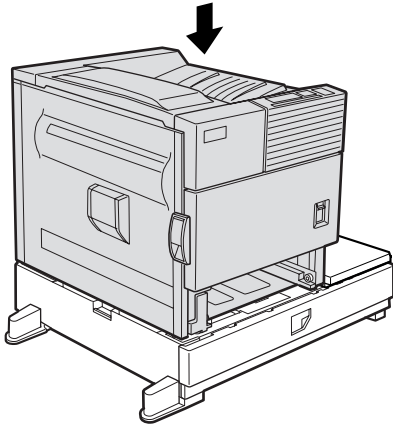
Note: The center of gravity of the machine lies in the left side when viewed from the machine. When lifting the machine, be careful not to drop.

B. Installation of paper feed options to the machine

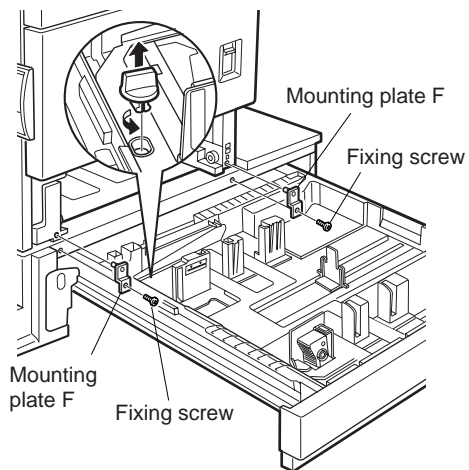
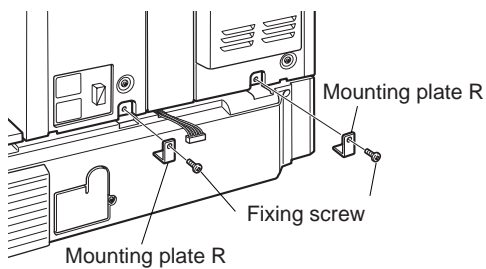
Note: Before use of this machine, one of the paper feed option units (AR-D13/AR-D14/AR-MU1) should be installed to the machine for safety reasons.

Refer to the drawing of the AR-MU1 in this manual.

- 1) Put the machine on the previously installed option unit.
Be sure to check that the boss of the option unit is securely engaged with the machine and that the external lines (front and left sides) of the option unit and those of the machine are aligned completely.



- 2) Connect the machine with the option unit.



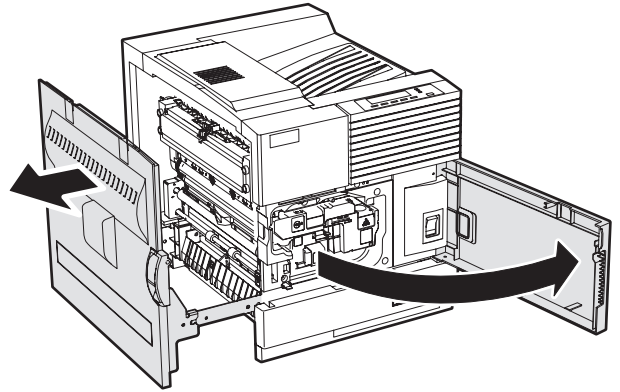
- 3) Install the option power source (AR-DC1).

* For necessity of installation, refer to the option combination.

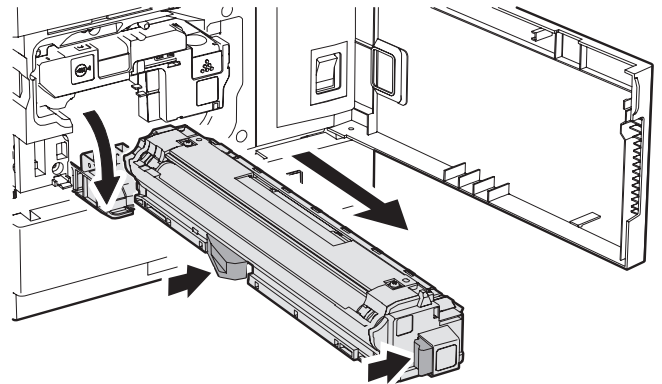
* For the installing procedure, refer to the AR-DC1 Service Manual.

C. Setting related to process

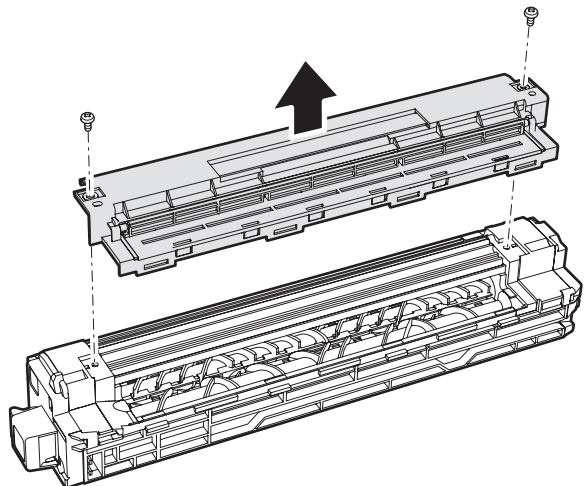
- 1) Open the left door and the front door.



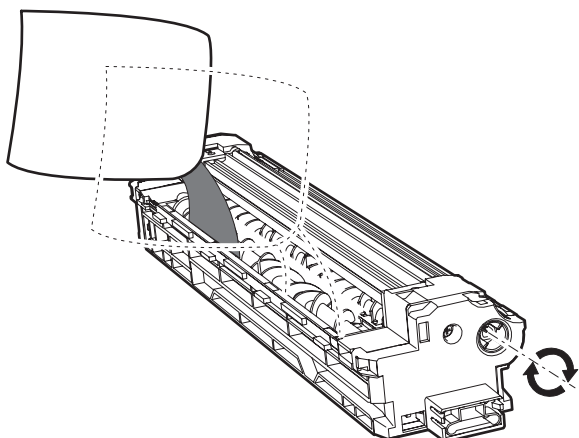
- 2) Remove the developer cartridge from the machine.



- 3) Remove the top cover of the developer cartridge.



- 4) While rotating the MG roller, supply developer into the developer cartridge evenly.B

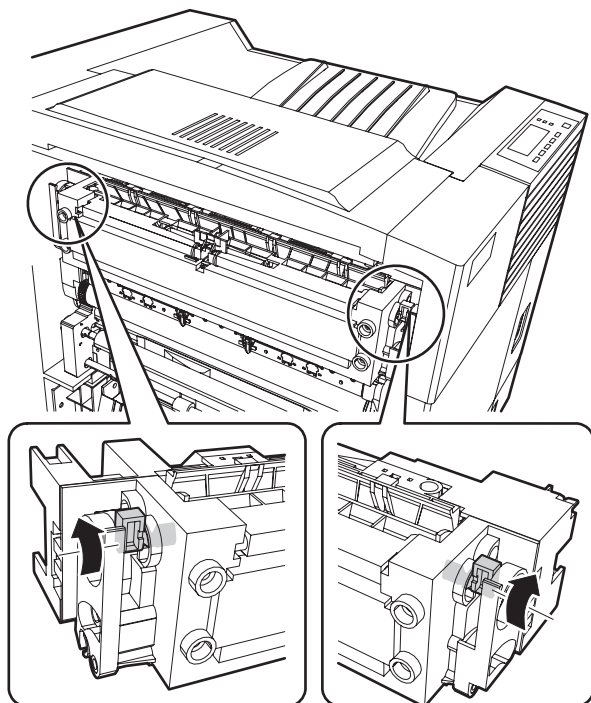


Note: Before opening the developer seal, shake it 4 or 5 times.

- 5) Attach the top cover to the developer cartridge and install the cartridge to the machine.

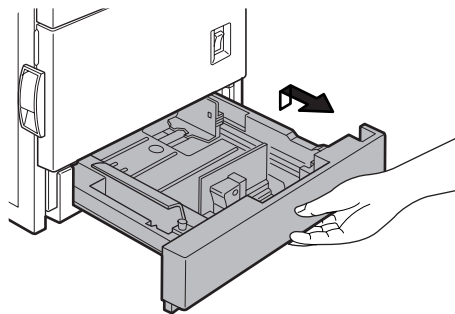
D. Setting related to fusing

- 1) Put down the right and the left levers of the fusing unit in the arrow direction.

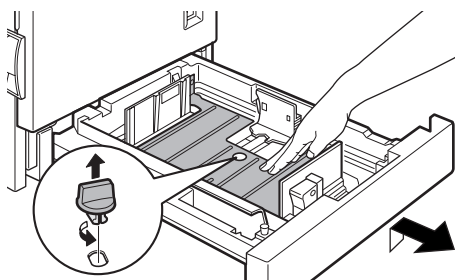


E. Paper setting

- 1) Pull out the first stage paper feed tray.



- 2) While pressing the paper holding plate, remove the fixing pin.



- 3) Put paper in the tray, and close the paper feed tray.

F. Automatic developer adjustment

- 1) Attach the cabinets which were removed.
- 2) Close the left door and the front door.
- 3) Insert the power plug into the power outlet.
- 4) While pressing the [MENU] key and the [OK] key, turn on the power switch, and the machine will enter the diag mode.
- 5) On the operation menu, select "AUTOMATIC DV AD."

(LCD Display)

AUTOMATIC DV ADJ.
128

- 6) Press the [OK] key, and the automatic developer adjustment will be performed.
During execution of the automatic developer adjustment, the data (LED) blinks and the LCD indicates the toner sensor value.
- 7) After about 2 min, the adjustment value is stored in the machine.
Check that the mode was normally completed.
Normal end: The data LED goes off.
Abnormal end: The error LED lights up.
Remove the cause of the error, and execute the automatic developer adjustment again.
- 8) Press the [BACK/C] key, and the machine returns to the normal mode and enters the warm-p mode.

G. Print test

- 1) Press the [MENU] key to display "USER SETTING."
- 2) Press the [OK] key to select the menu.
- 3) Use [▲] and [▼] keys to select List Print, and print the user setup list to check the print quality.
- 4) Press the [MENU] key again to return to the normal menu.

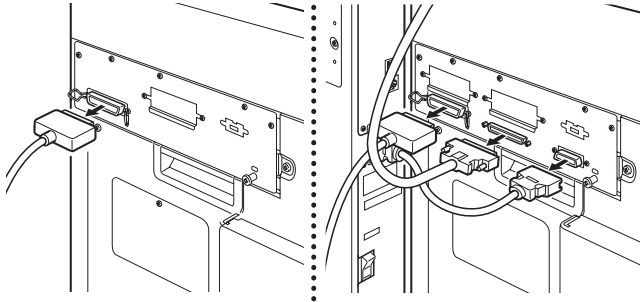
5. Option expansion memory installation

A. Hard disk (ARHD3), PS3 Expansion kit (ARPK1), print server card (AR-NC5J), expansion memory (commercially available one)

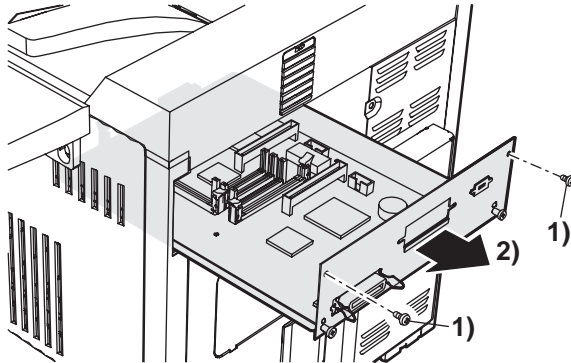
Note: Before performing this installation work, check that the data lamp on the operation panel is neither lighting nor blinking.

- 1) Turn off the power of the machine and disconnect the power plug from the power outlet.
- 2) Remove all the cables (such as printer cables) from the control PWB.

★ In the case of the printer control PWB ★ In the case of the MFP control PWB

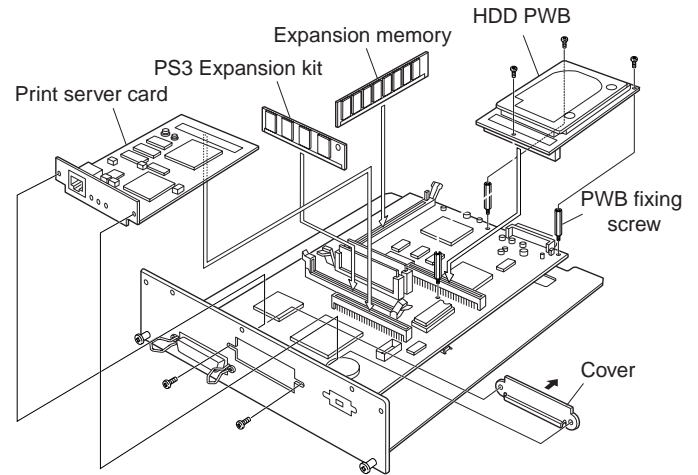


- 3) Remove the control PWB.



- 4) Install each option.

<Printer model>



Note: To prevent breakage by static electricity, take the following measures.

- a. Use an earth band for installing procedures.
- b. Keep the memory in the protection bag, and remove it from the bag only just before installation.
- 5) Install the control PWB to the machine.
- 6) Attach the cables which were removed before installation of the memory.
- 7) Insert the power plug into the power outlet, and turn on the power.

B. Print test

- 1) Press the [MENU] key to display "USER SETTING."
- 2) Press the [OK] key to select the menu.
- 3) Use [▲] and [▼] keys to select List Print, and print the setup list or demonstration page to check the print quality.
- 4) Press the [MENU] key again to return to the normal menu.

C. Other options

For installation of the other options, refer to the Service Manual of each option.

[7] DISASSEMBLY AND ASSEMBLY, MAINTENANCE

1.Maintenance System Table

A. Engine section

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Unit name	Part name	When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Drum peripheral	Drum		▲	▲	▲	▲	▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	▲	▲	▲	▲	
	Transfer roller	×	×	▲	×	▲	×	▲	×	▲	
	Discharge plate	×	×	▲	×	▲	×	▲	×	▲	
	TR bearing (F/R)			×		×		×		▲	
	Transfer roller collar			×		×		×		▲	
	TR gear	×	×	×	×	▲	×	×	×	▲	
	Screen grid	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	▲	▲	▲	▲	
	Charger case (M/C)		○	○	○	○	○	○	○	○	
	Charging plate (saw teeth)	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
Developing section	Developer		×	▲	×	▲	×	▲	×	▲	Supplied when installing
	DV blade		×	▲	×	▲	×	▲	×	▲	
	DSD collar		○	○	○	○	○	○	○	○	
	DV side seal F		×	▲	×	▲	×	▲	×	▲	
	DV side seal R		×	▲	×	▲	×	▲	×	▲	
	Toner cartridge										Attached when installing./ EX Japan: 814g, user replacement for every 30K.
Fusing section	Upper heat roller		○	○	○	▲	○	○	○	▲	
	Lower heat roller		○	○	○	▲	○	○	○	▲	
	Upper separation pawl		×	×	×	▲	×	×	×	▲	
	Lower separation pawl		×	×	×	▲	×	×	×	▲	
	Thermistor		○	×	○	×	○	×	○	×	Clean and remove paper dust.
	Upper heat roller gear		×	×	×	▲	×	×	×	▲	
	Paper guides	○	○	○	○	○	○	○	○	○	
	Gears		☆	☆	☆	☆	☆	☆	☆	☆	
Filters	Ozone filter			▲		▲		▲		▲	
Paper feed section	Paper feed roller	○	○	×	○	×	○	×	○	×	Note 1
	Torque limiter	×		×		×		×		×	Note 1
Transport section	PS follower roller	○	○	○	○	○	○	○	○	○	
Paper exit reverse section	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
	Paper dust remover		×	▲	×	▲	×	▲	×	▲	
Drive section	Gears(Specified position)	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Belts							×			
Image quality		×	×	×	×	×	×	×	×	×	
Other	Sensors			×		×		×		×	

Note 1:Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Torque limiter section: 80K or 2 years

B. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)

○ Clean

▲ Replace

△ Adjust

☆ Lubricate

□ Move position

Option name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Separation pad	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport roller	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Finisher	Transport section	Transport rollers	○		○		○		○		○	
		De-curler roller	(○) ×	×	○	×	○	×	○	×	○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple un											Replace UN at 100K staple.
	Staple cartridge											User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Saddle finisher	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple UN											Replace UN at 100K staple (including the staple UN and the holder section).
	Staple cartridge											User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.

Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

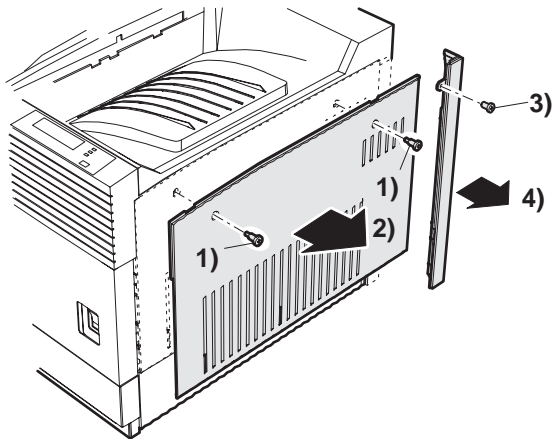
2. Disassembly and assembly

Note:

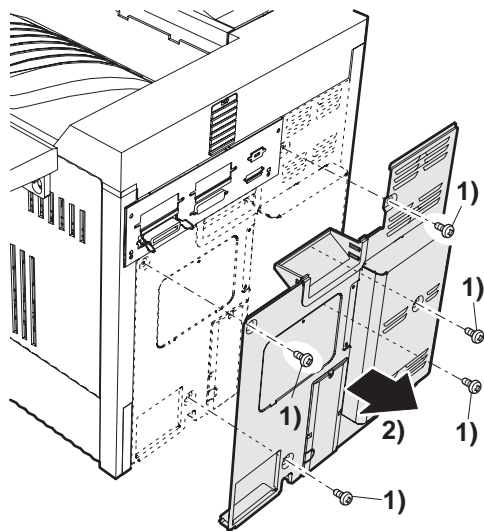
- When assembling, check that the flat cable and the harness connectors are securely connected.
- When connecting the flat cable, be careful not to break the pins.
- When installing the PWB unit and the memory module, use an earth band to prevent against breakage by static electricity.

A. Exterior

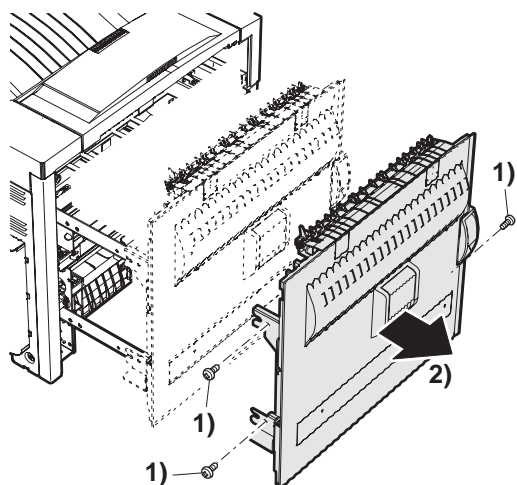
(1) Right cabinet



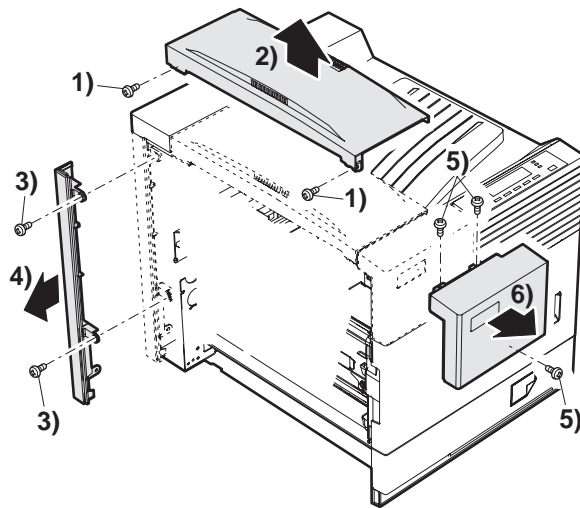
(2) Rear cabinet



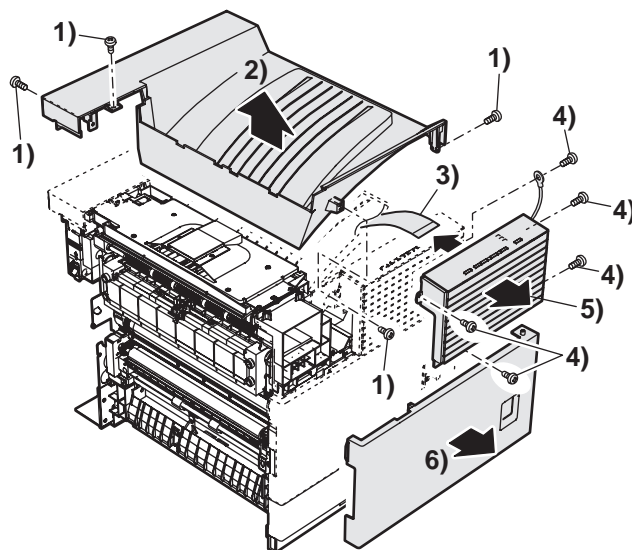
(3) Left door unit



(4) Paper exit upper cabinet/Front left upper cabinet

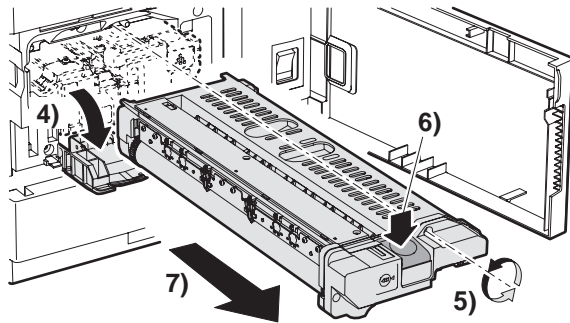
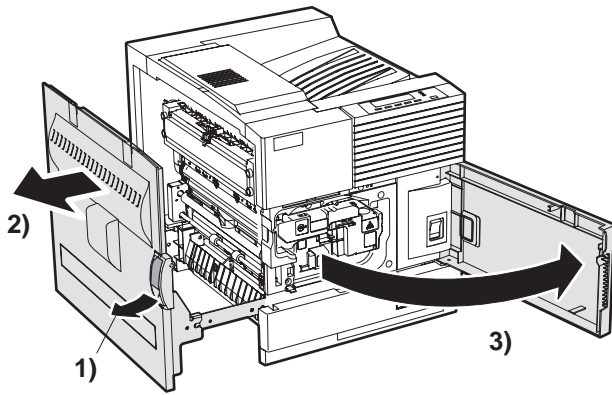


(5) Upper cabinet/Operation panel/Front door

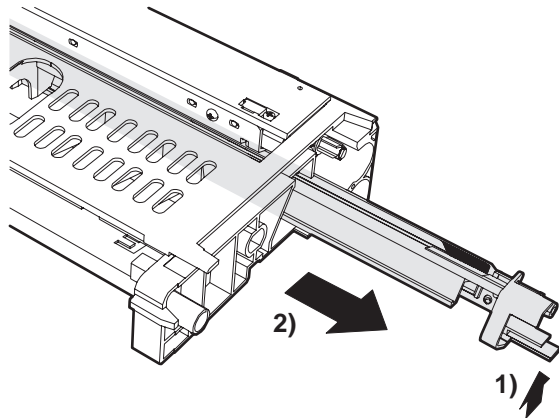


B. Drum peripheral

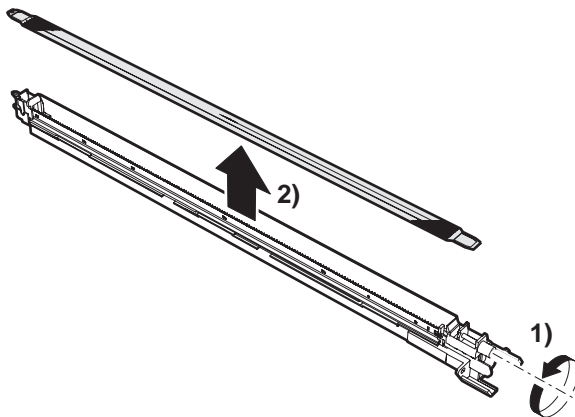
(1) Drum cartridge



(2) Main charger /charger case

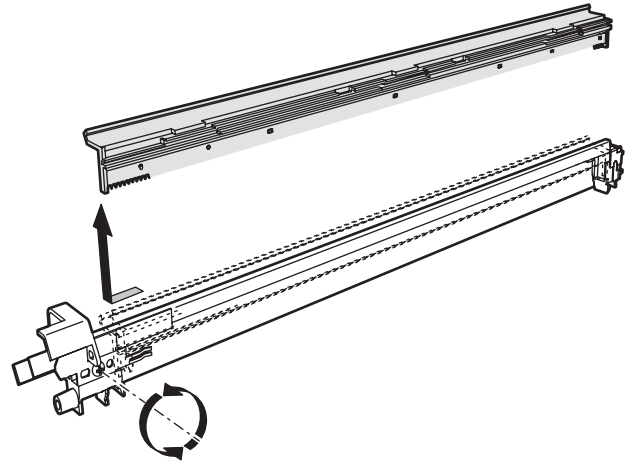


(3) Screen grid

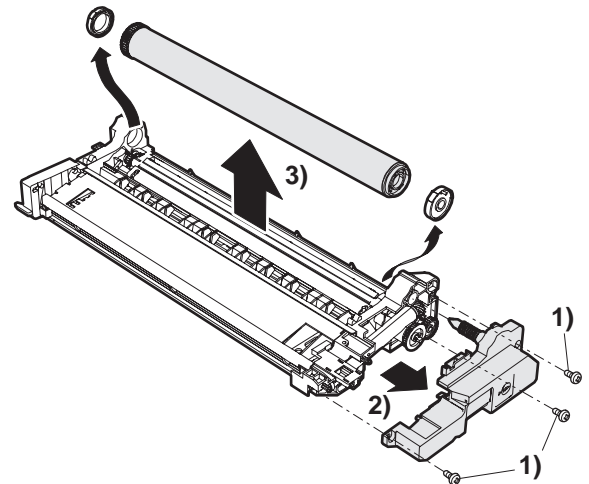


(4) Main charger

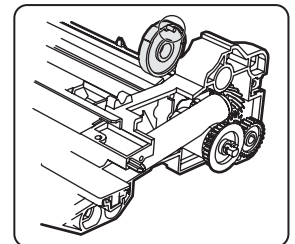
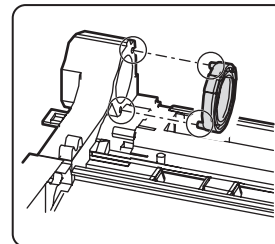
Loosen the screw and remove the charger.



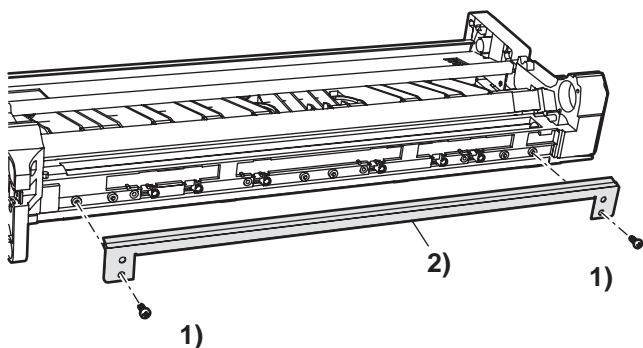
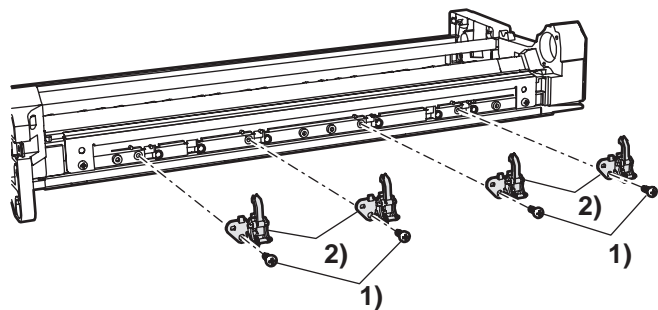
(5) OPC drum/DSD collar



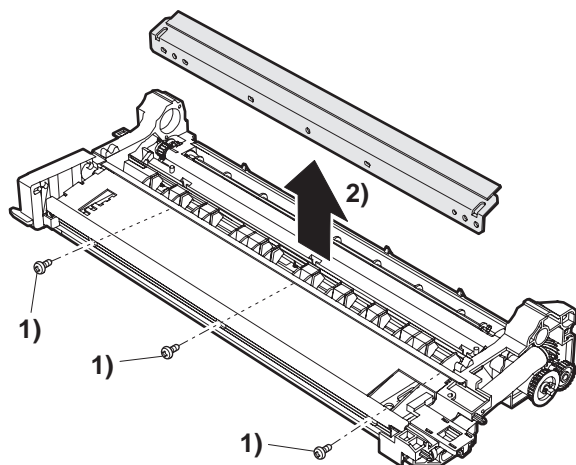
Note: When installing the DSD collar, engage the DSD collar boss with the hole in the drum frame.



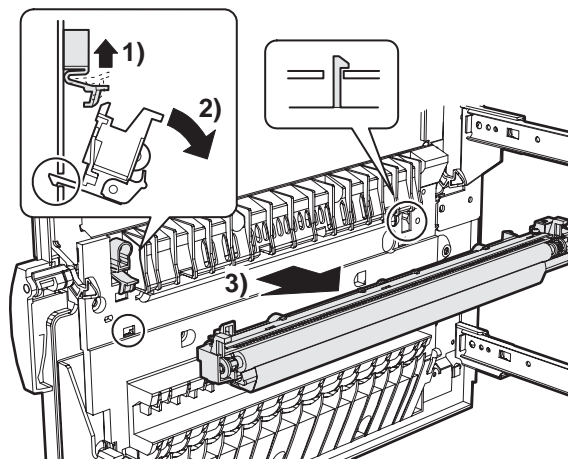
(6) Drum separation pawl



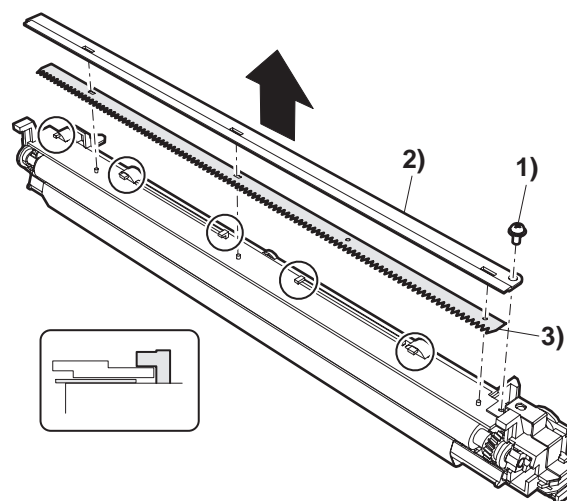
(7) Cleaning blade



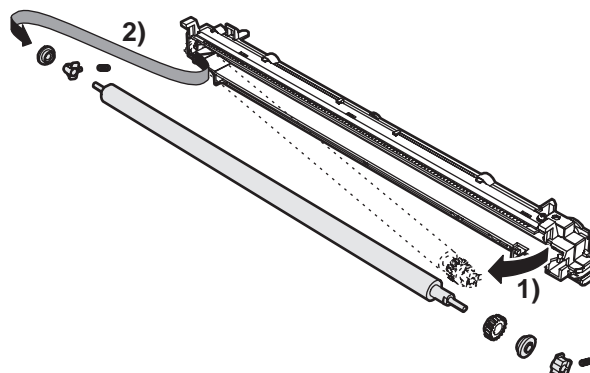
C. Transfer roller unit



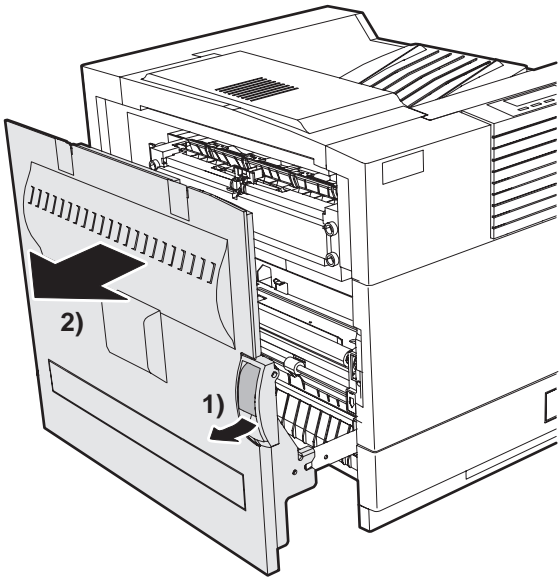
(1) Discharge plate



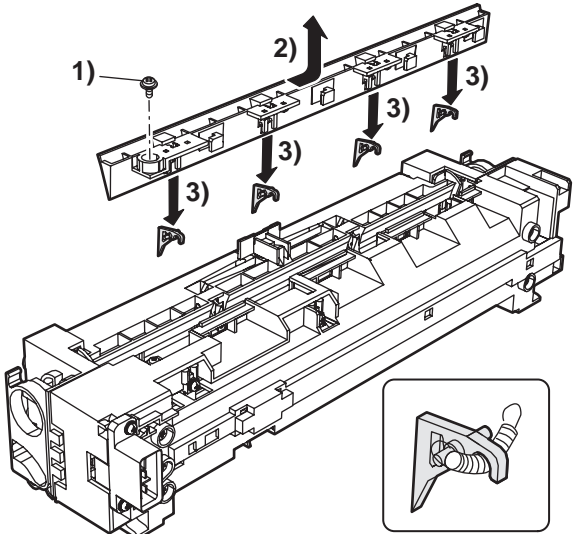
(2) Transfer roller



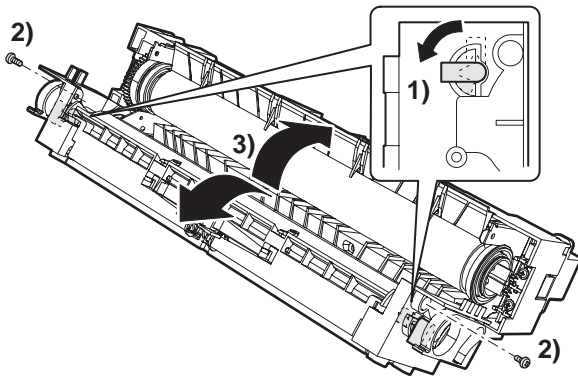
D. Fusing unit



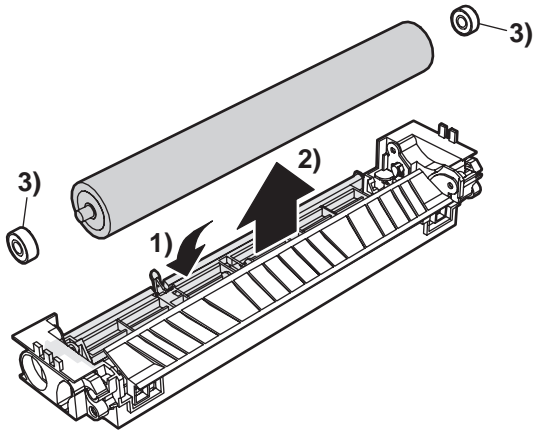
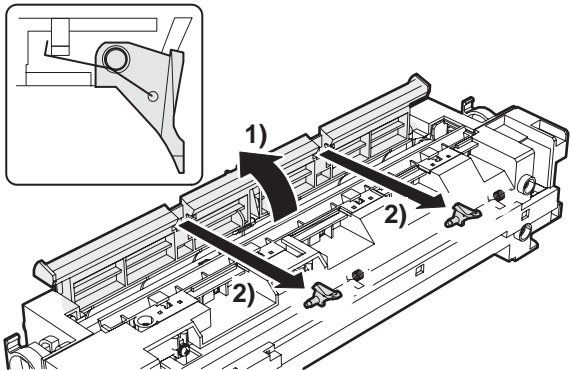
(2)Upper separation pawl



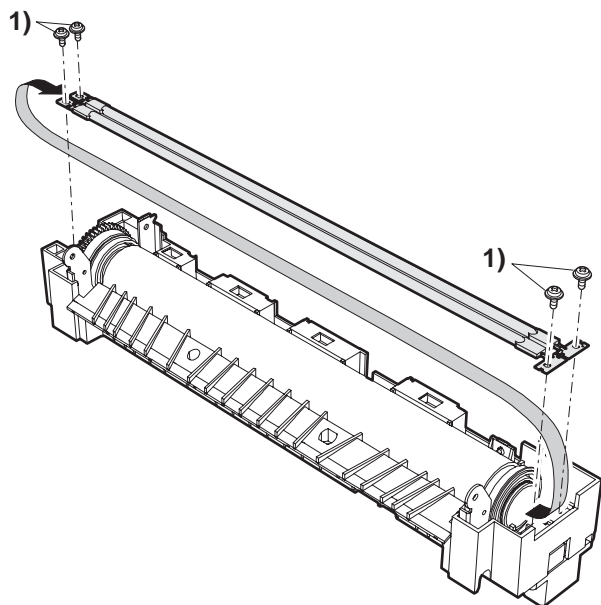
(3) Lower heat roller



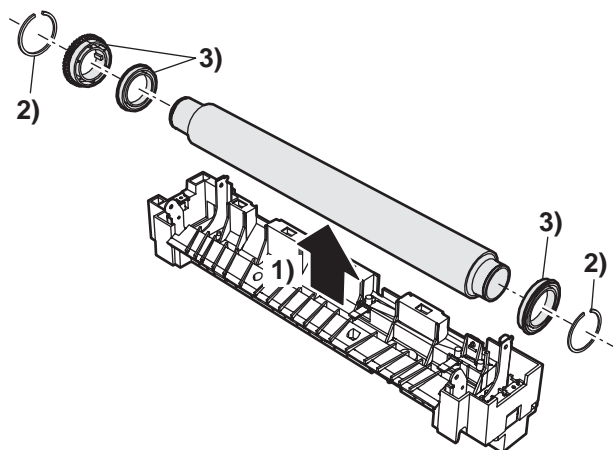
(1)Lower separation pawl



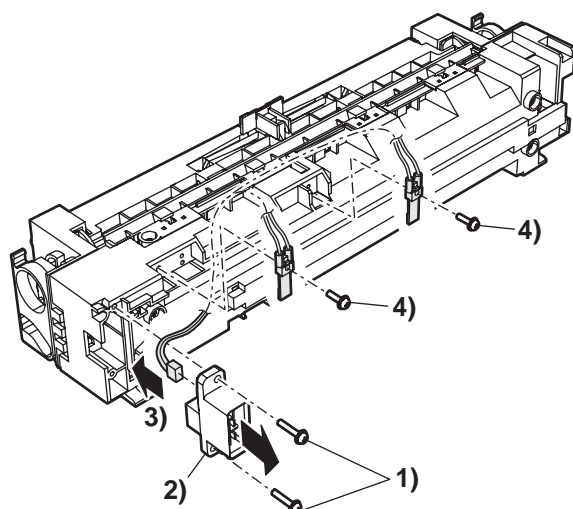
(4) Heater lamp



(5) Upper heat roller

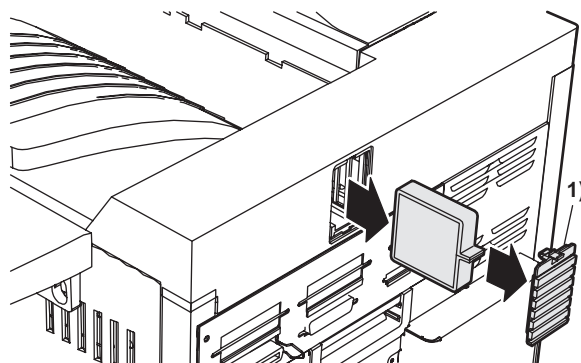


(6) Thermistor



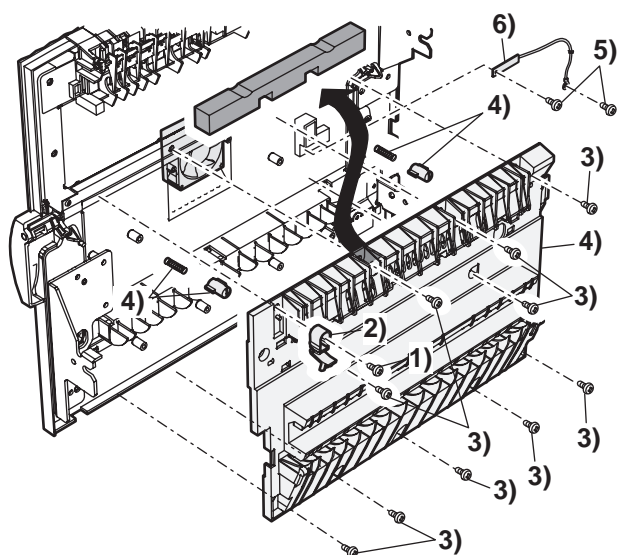
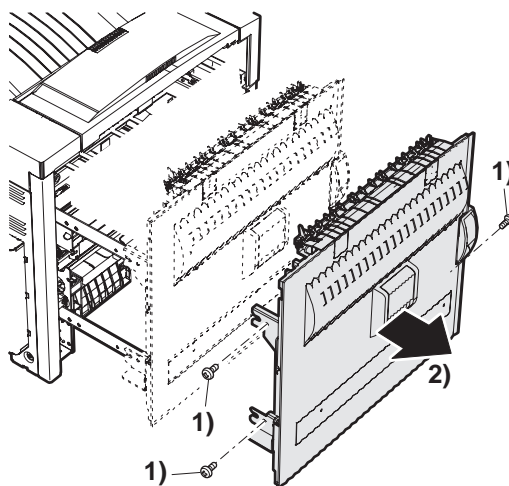
E. Ozone filter

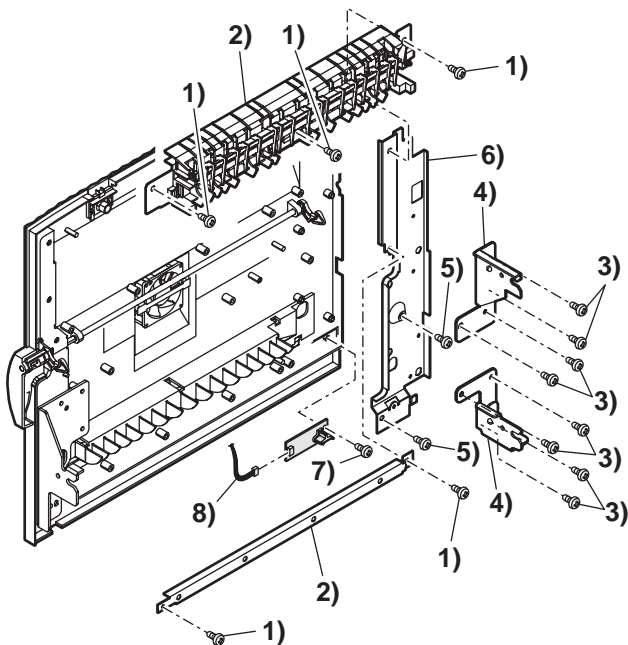
(1) Ozone filter



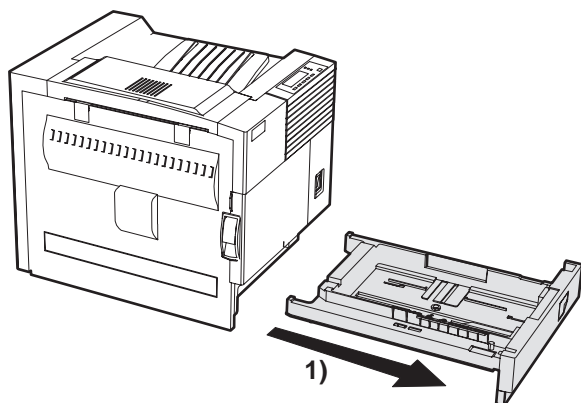
(2) Ozone filter

Note: Not subject to maintenance
This part is not included in the counter kit.

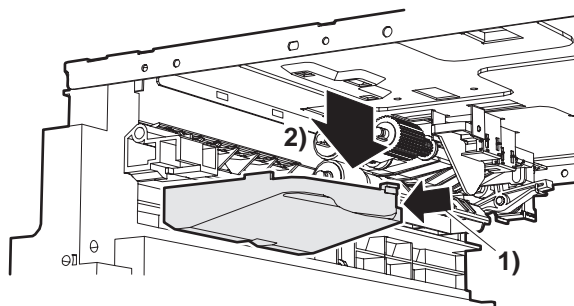




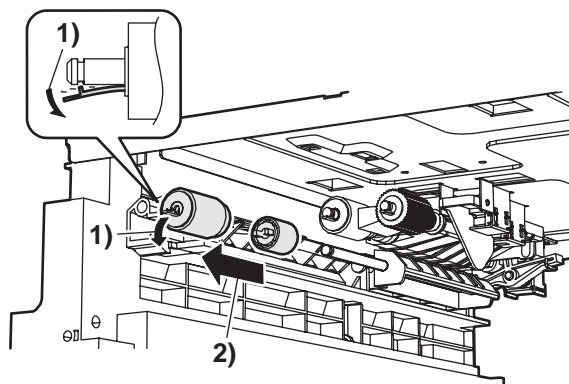
F. Paper feed section



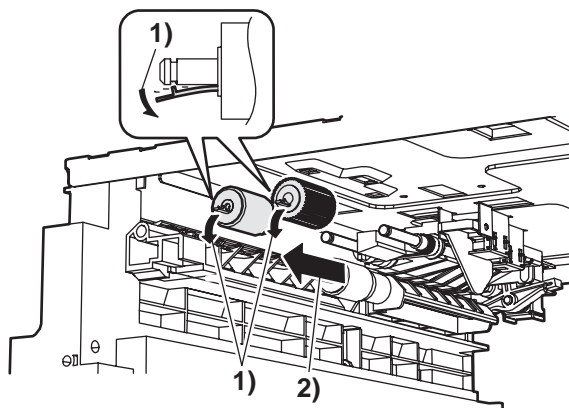
(1) Paper guide



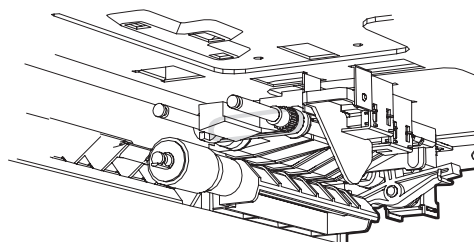
(2) Separation roller/torque limiter



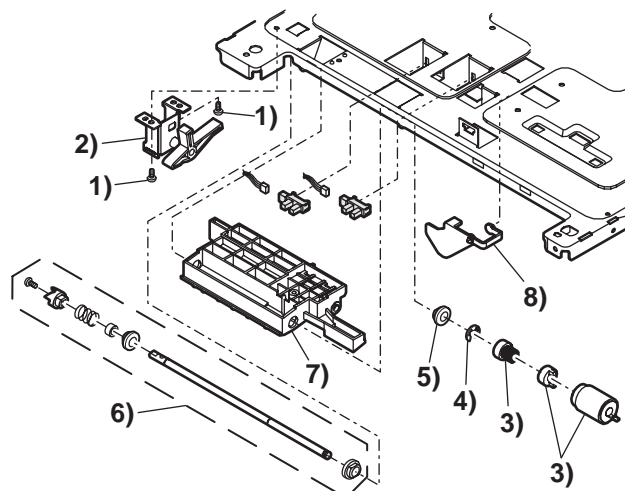
(3) pick-up roller/ paper feed roller



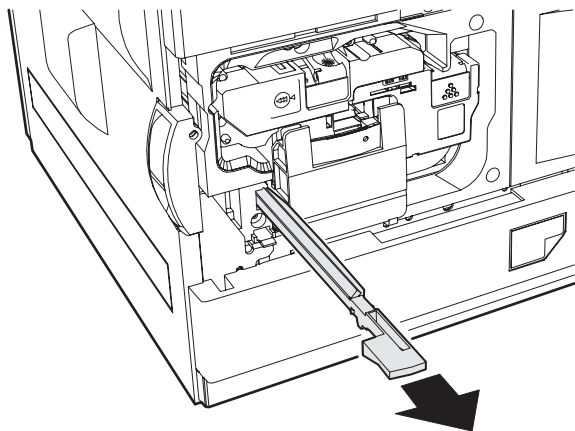
(4) Belt



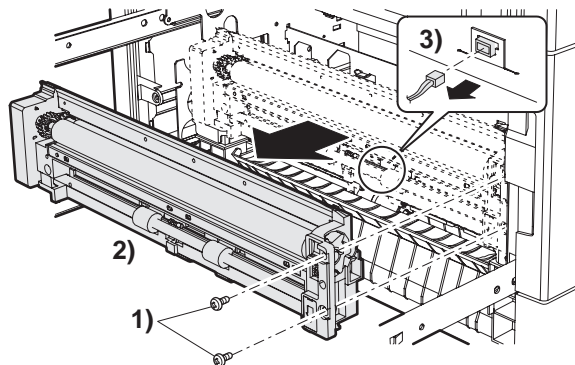
(5) Upper limit sensor/paper empty sensor



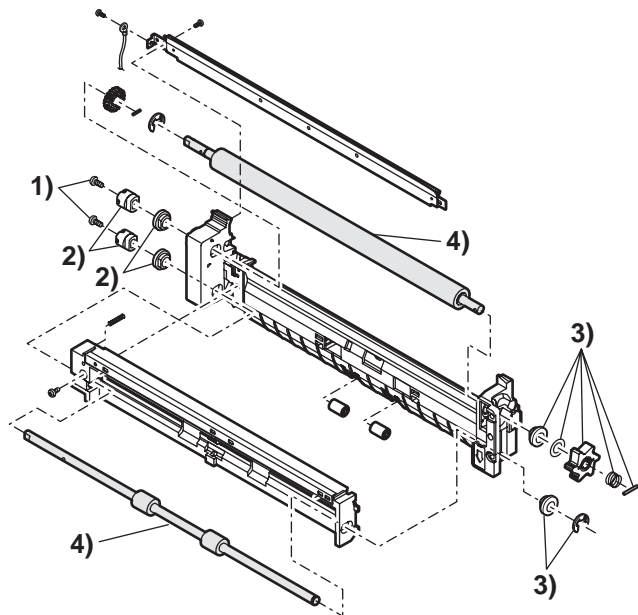
G. Paper dust removing unit



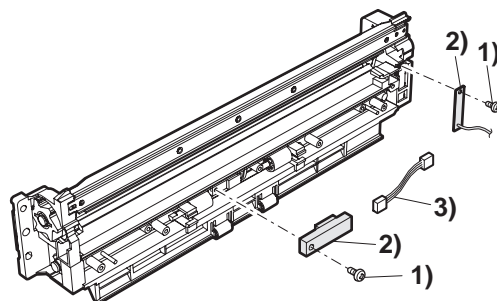
H. Resist roller unit



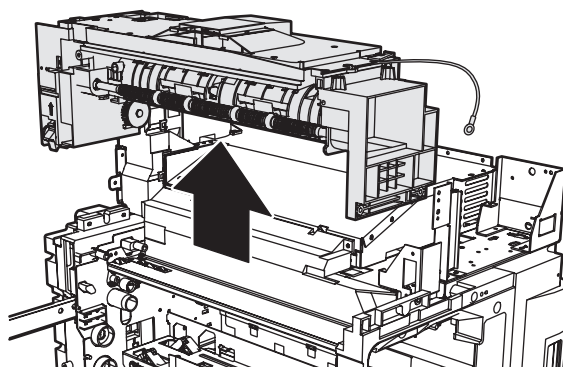
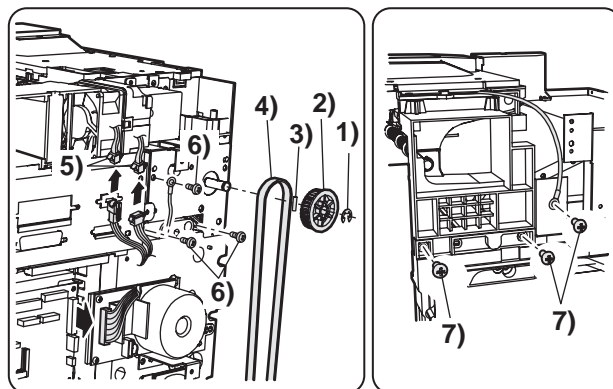
(1) Resist roller



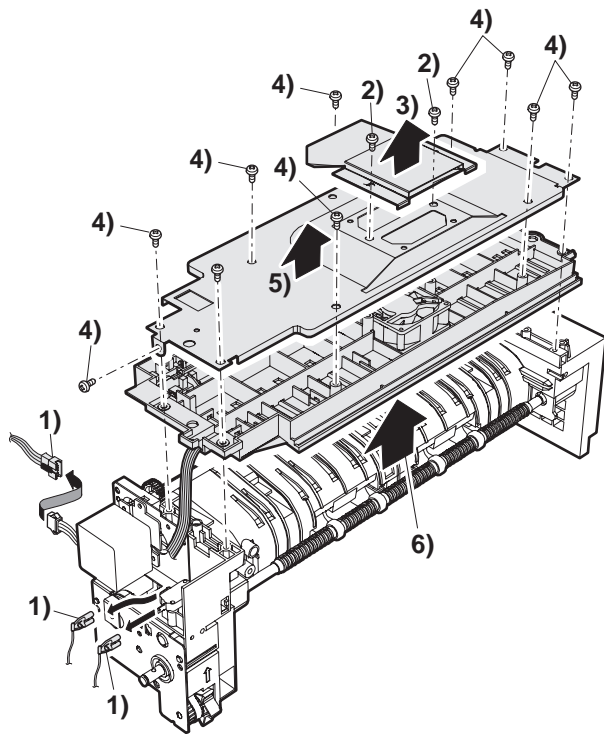
(2) Resist sensor



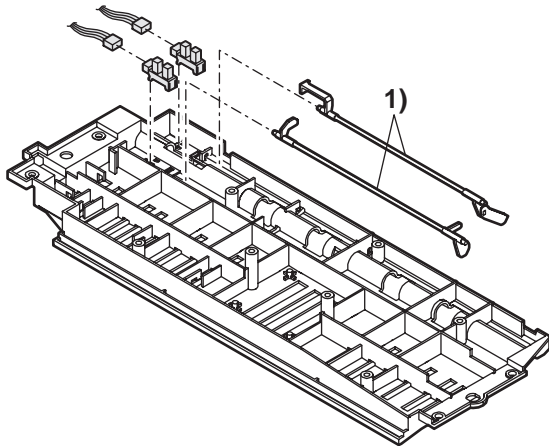
I. Paper exit unit



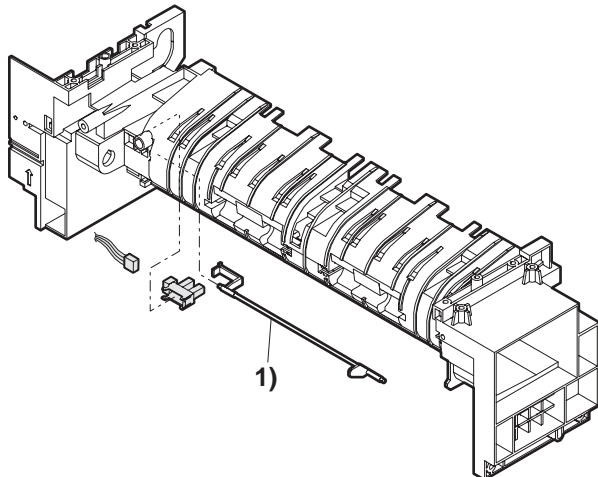
(1)Paper exit upper paper guide unit



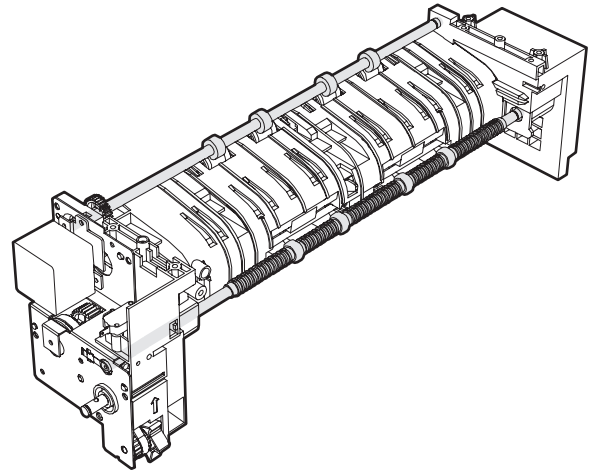
(2)Paper exit sensor/switch-back sensor



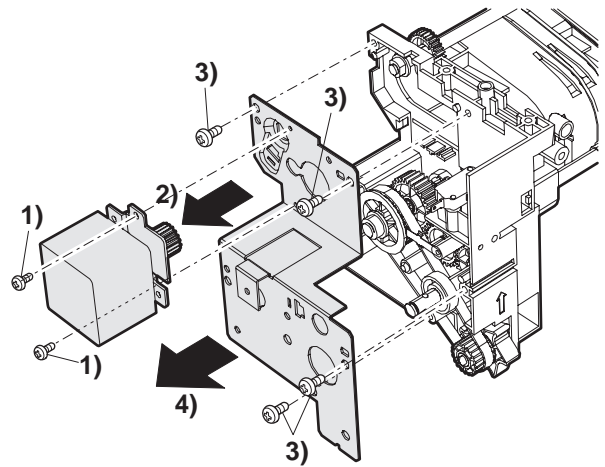
(3)Paper exit sensor 2



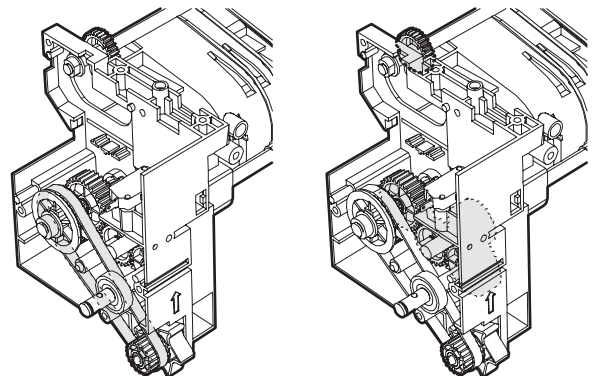
(4)Paper exit roller



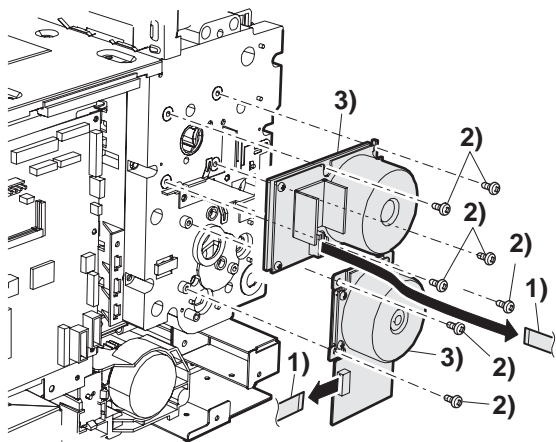
(5)Paper exit motor



(6)Paper exit drive section

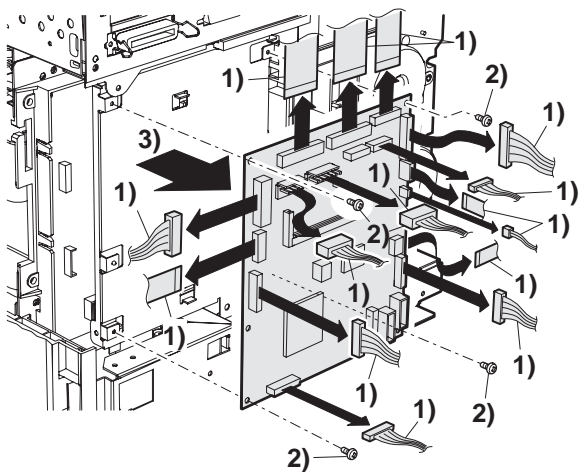


J. Main motor/drum motor

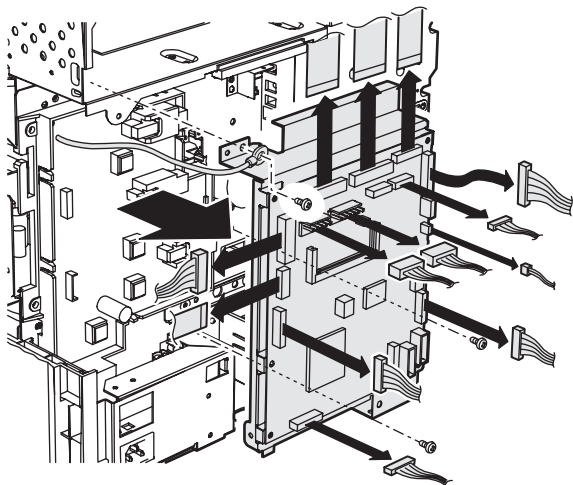


K. PCU PWB

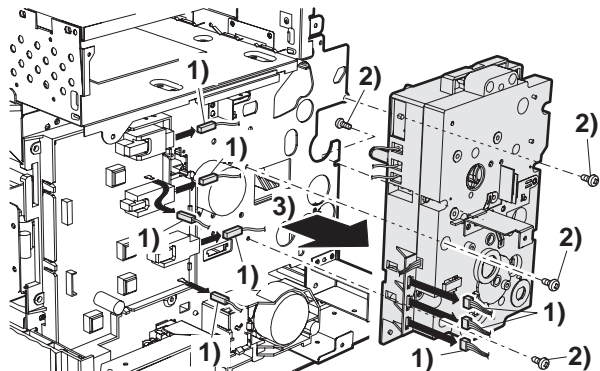
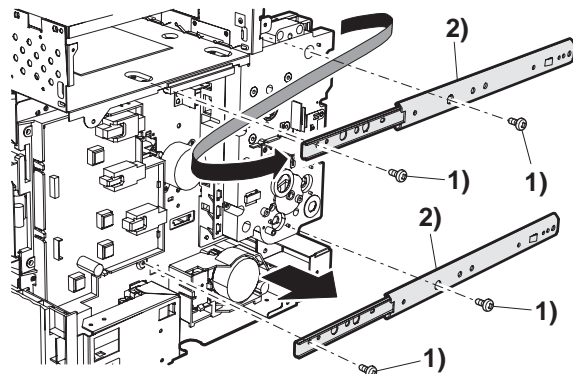
Note: When replacing the PCU PWB, remove the EEPROM from the PCU PWB and install it to a new PWB.



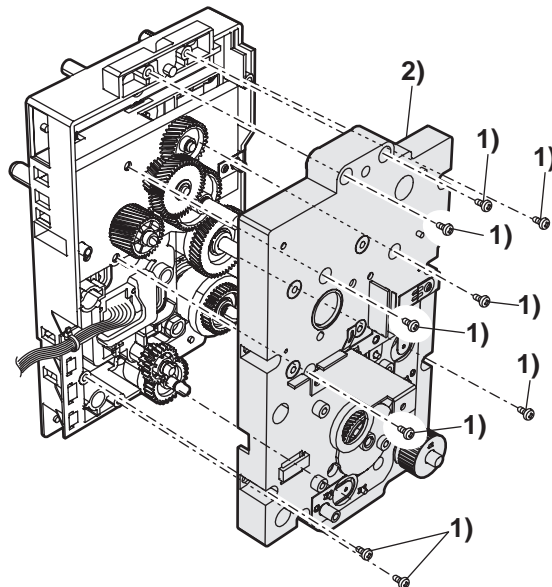
L. PCU PWB base plate unit

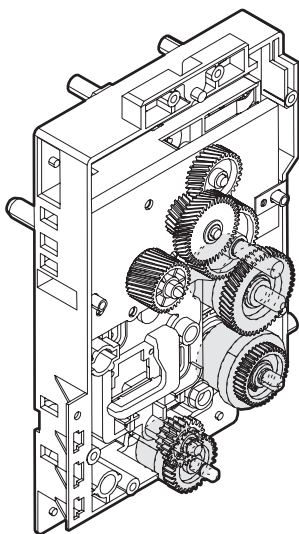
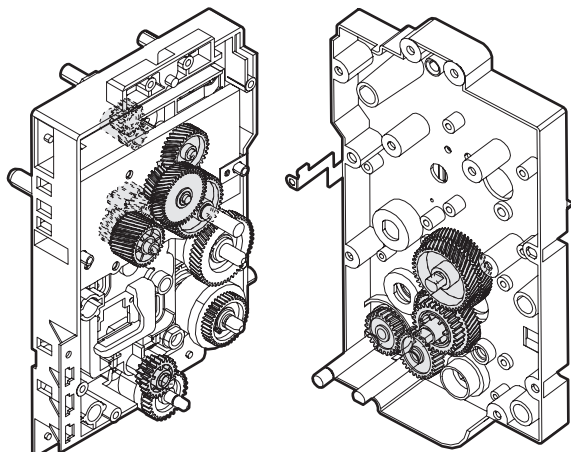


M. Main drive unit

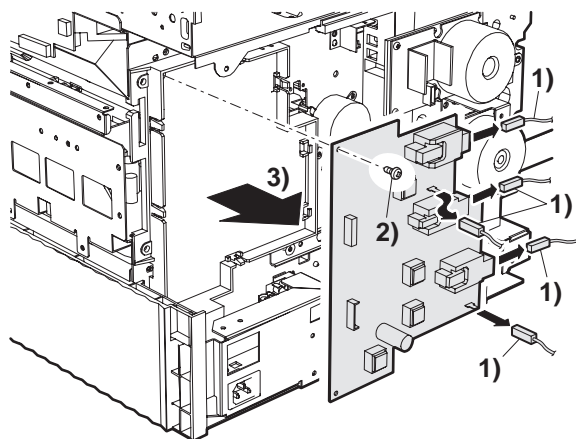


(1) Drive gear/clutch

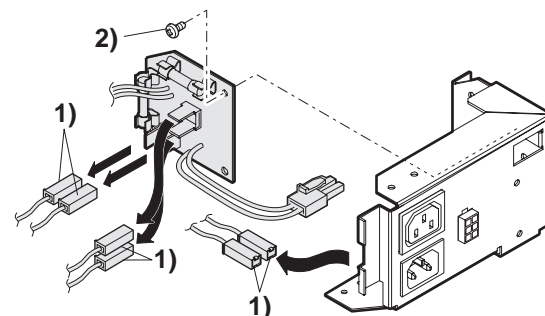
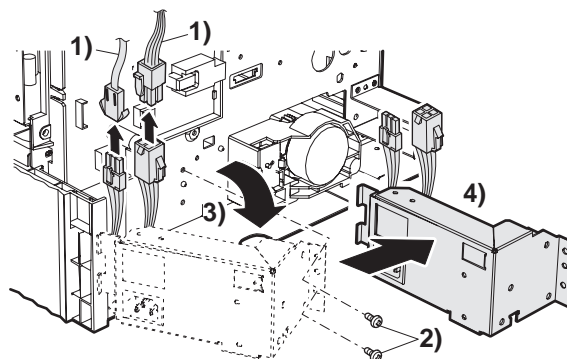




N. High voltage PWB

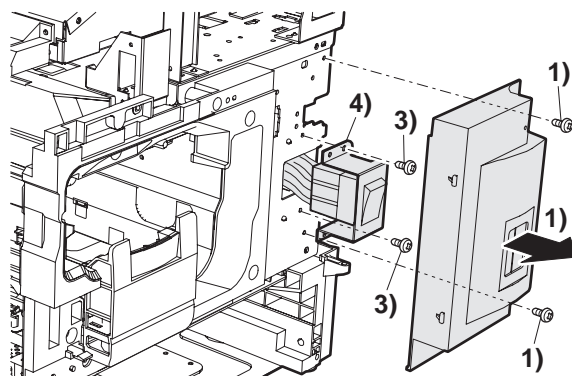


O. Fuse PWB

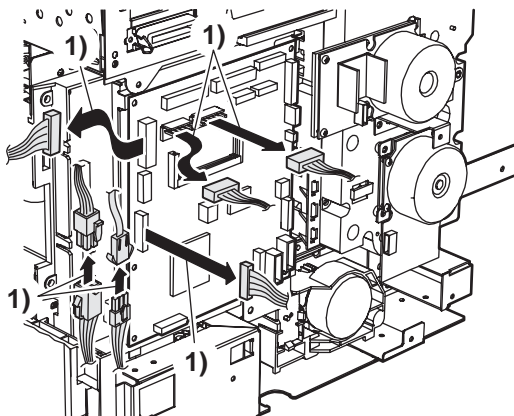


P. Power unit peripheral

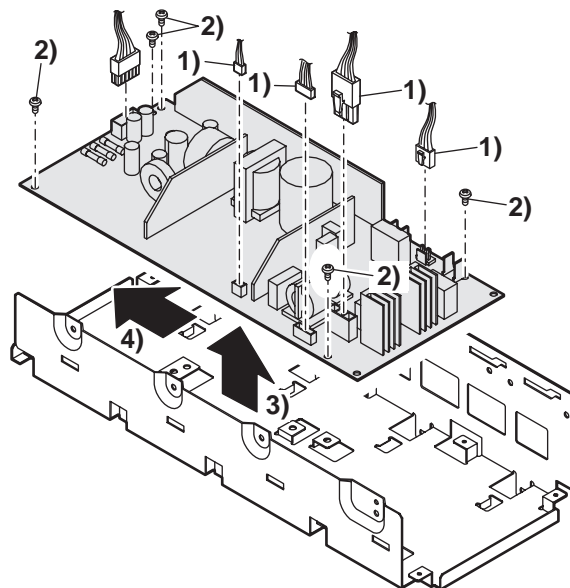
(1) Power switch



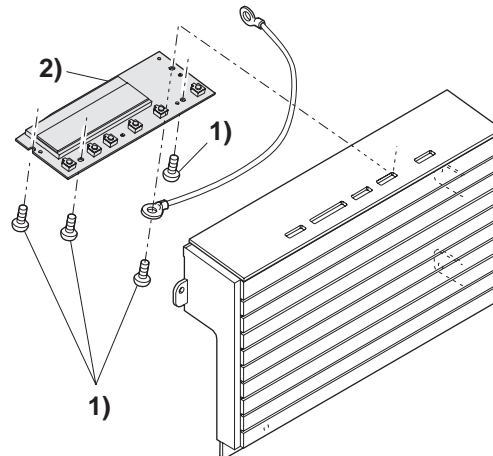
(2) Power unit



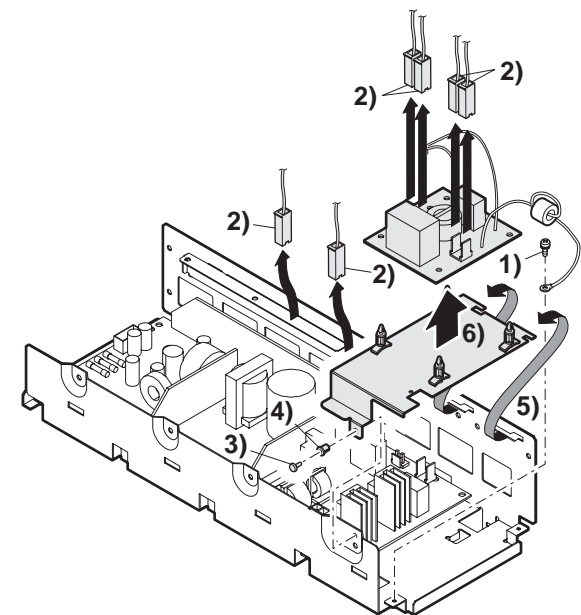
(4) Power PWB



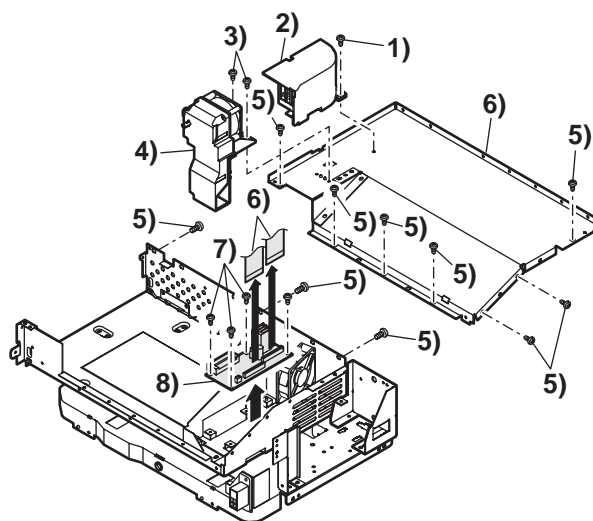
Q. Printer operation PWB



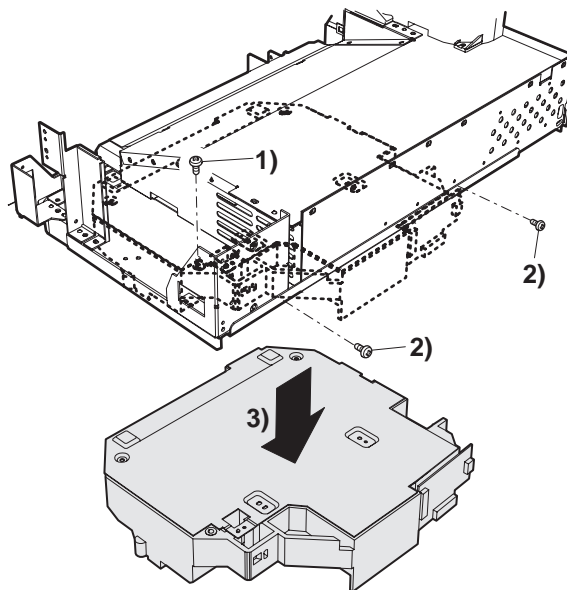
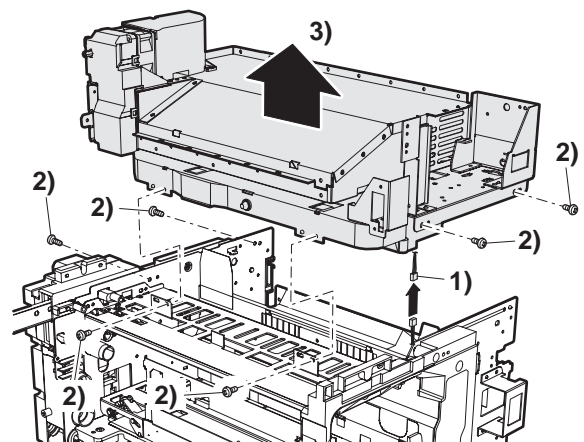
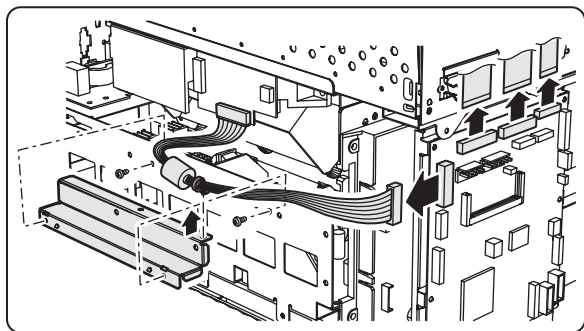
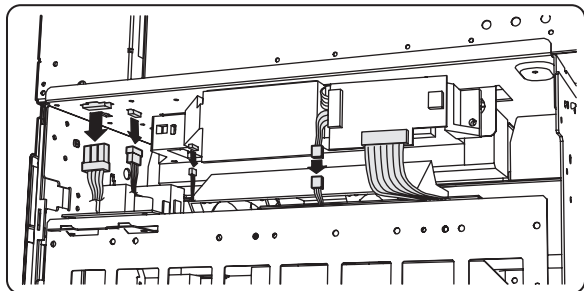
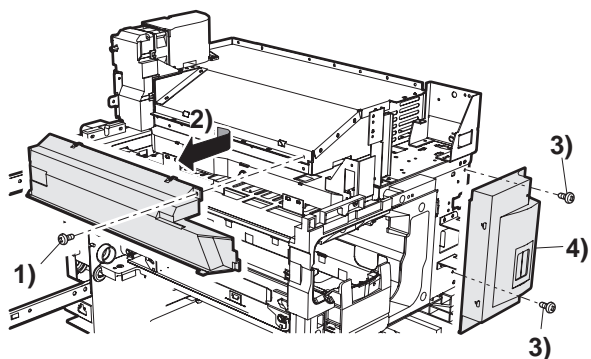
(3) Filter PWB



R. Mother PWB

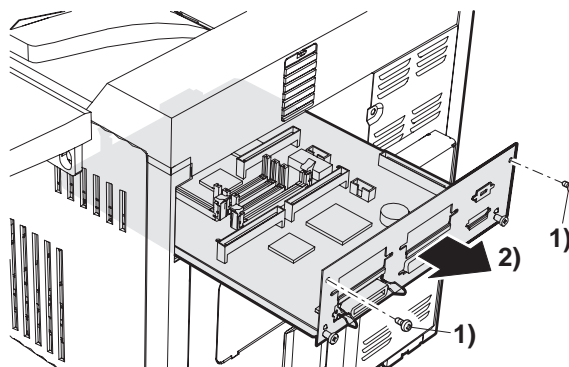


S. Laser unit



Note: When the LSU is disassembled, the LSU right angle adjustment is required.

T. Controller PWB



[8] MACHINE OPERATION

1. Function of each LED

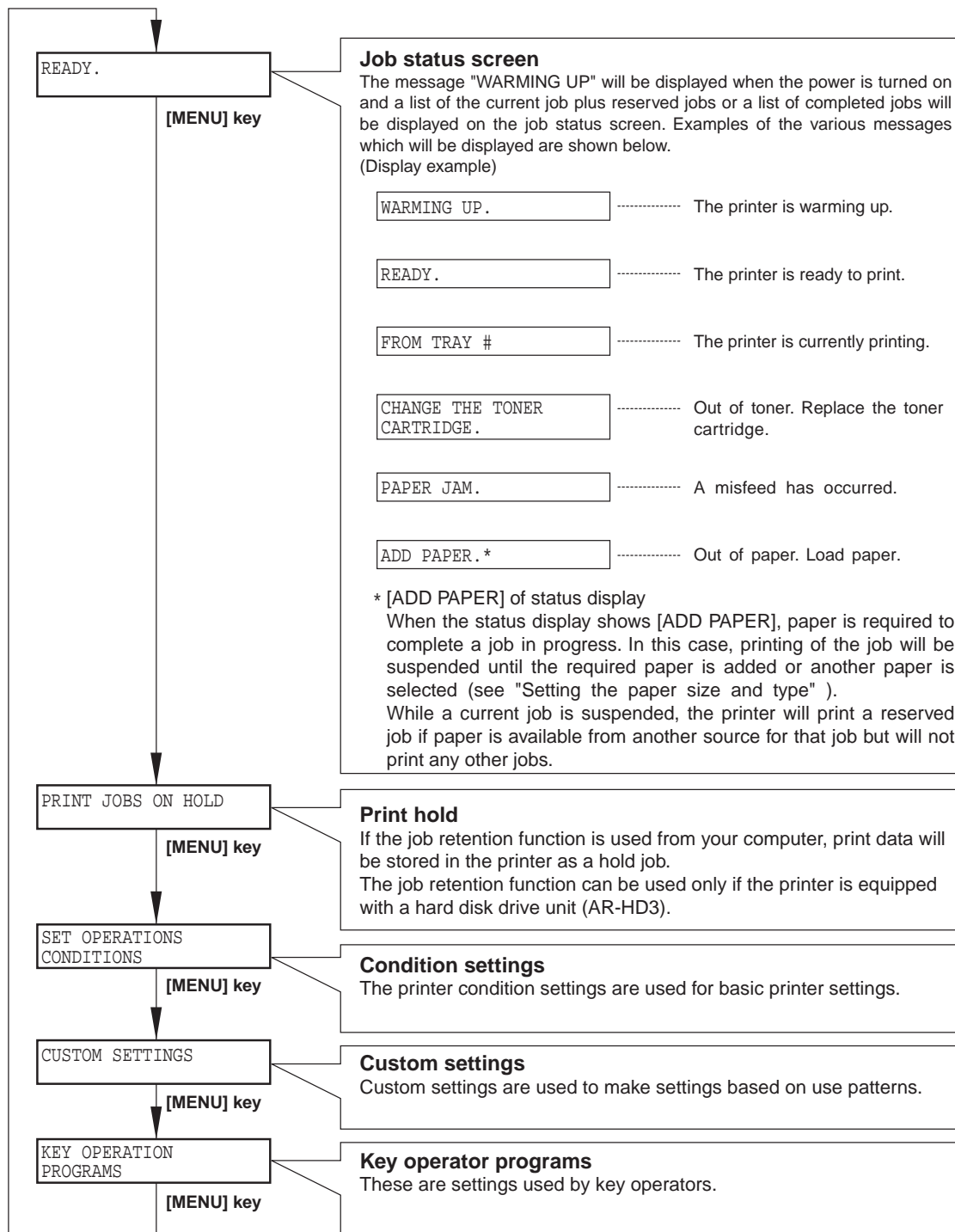
	READY	DATA	ERROR
ON	Print job reception enable	•When RIP-completed print data are stored in memory.	•When a trouble which can be canceled by the user occurred.
Flash		•When data are processed in the printer board (during RIP).	•When a trouble which requires service call occurred.
OFF	Print job reception disable	•Neither print data nor data under process are stored.	•No trouble

* RIP:Raster In Processor. Develops the print command into pixel information.

2. Outline of each mode

The menu groups are classified into five groups and are selected consecutively by pressing the [MENU] key. If the [OK] key is pressed when the desired menu screen is displayed, a message will appear to indicate the next required operation.

In addition, there is the service diag mode used for a serviceman.(with the scanner unit installed)



3. Setting mode on Computer side

Mode	Outline	Remark
Setting by the printer driver	Changed and set according to the print form of each job.	
Web menu frame	Used to set the work board functions from the Web browser (*1).	Only when the NIC board (AR-NC5J) is installed.

*1: Recommended Web browser
Internet Explorer 4.0 or later,
Netscape Navigator 4.0 or later

4. Printer environment setup

		Set value (Default)
Initial setup	Smoothing	YES* • NO
	Number of copies	1* ~ 999
	Print direction	Vertical* • Horizontal
	Standard paper feed paper size	A3 • B4 • A4* • B5 • A5 11" x 17" • 8.5" x 14" • 8.5" x 13" • 8.5" x 11" • 7.25" • 10.5" • 5.5" x 8.5"
	Standard paper feed paper type	Normal paper, printed paper, recycled paper, letter head paper, punched paper, color paper
	Standard paper exit tray	Differs depending on installation of peripheral devices. *1
	White paper print inhibition	Inhibit / Allow*
SPDL setup		See separate sheet 1.
PS setup		(PS error cause) Print / not print *
ESC / P(Super) setup	Print mode setup	
	Paper position setup (PC-PR201H only)	
	Position correction setup	
	Japanese font setup	
	European language font setup	
	Character code table setup	
	Print column range setup	
	Print start position setup	
	Change-line code setup	
	Perforations skip setup	
	Each language character setup (PC-PR201H only)	
	Zero character selection	
	Reduction print	
	Print quantity setup	
	Print direction setup	
	Standard paper feed paper size setup	
	Standard paper exit tray setup	
	Hexadecimal dump output setup	
	I / O timeout time setup	
	Setup list print	
	Standard paper feed paper type setup	
	A4 / Letter automatic selection	
	Precaution notifying page print inhibition	

5. User setup

		Set value (Default)
Total print quantity display		
LCD contrast adjustment		
List print	Setup list	
	Printer test page	
Time setup		
Paper feed tray setup		
Paper feed tray automatic selection		

6. Web menu frame

		Set value (Default)
Receiver management	Email distribution scan receiver setup	
	File server store scan store receiver information setup	
	Desktop distribution scan receiver information setup	
	FAX receiver information setup	
	Internet FAX receiver information setup	
	Group receiver information setup	
	Confirmation of receiver information delete	
Memory box management	Remote send	
	Confidential reception	
	Interface broadcast (forward)	
Management setup	Network card setup	
	Password setup	
	Network scanner basic setup	
	Email status basic setup	
	Email system and DNS system basic setup	
	Email sender setup	
	Group index setup	
	Email status setup	

7. Key operator program

Key operator program			Set value (Default)	Remark
			Engine section LCD	
Auditor setup	Department counter setup		ON / OFF*	
	Print quantity total	Print quantity total user display	ON / OFF*	
		Print quantity print		
	Total delete			
	Department number setup	Dpt. number registration (5 digits)		
		Dept. number / Delete		
		Dept. number / Change		
Energy-save setup		Dept. number / Print		
	Print inhibit with disabled dept. number		Yes / No*	
	Auto power shut off setup		15min / 30min / 60min* / 120min / 240min	
	Auto power shut off inhibit		Inhibit / Allow*	
Operation panel setup	Pre-heat mode setup		15min / 30min / 60min / 120min / 240min / None*	
	Toner save		ON / OFF*	
	Auto clear time setup		15sec / 30sec / 60sec* / OFF	
Device setup	Message display time setup		3sec / 6sec* / 9sec / 12sec	
	Display language setup		Japanese* • English • French • Spanish	
	Duplex function inhibit		Yes / No*	
	Staple inhibit		Yes / No*	
	Paper feed desk inhibit		Yes / No*	
	Finisher inhibit		Yes / No*	
	Male bin stacker inhibit		Yes / No*	
	Inter staple position adjustment	Paper size A3	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	With the saddle finisher installed
		Paper size B4	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size A4R	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size Leisure	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size Letter R	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
Key operator program list print				
Key operator code change	First setup of key operator code		00000*	
System management setup	Basic setup	Print density adjustment	Standard* / Light / Slightly light / Slightly dark / Dark	
		Precaution notifying page output inhibit	Yes* / No	
		Test page output inhibit	Yes* / No	
		A4 / Letter size auto selection	ON / OFF*	
	Interface setup	Hexadecimal dump mode	ON / OFF*	
		Parallel port PDL selection	Auto* / PostScript / SPDL / ESC / P(Super)	
		Network PDL selection	Auto* / PostScript / SPDL / ESC / P(Super)	
		I / O timeout selection	1sec ~ 20sec* ~ 999sec	
		Port selection setup	For every job* / Time out / Parallel port disable / Network port disable	
	Network setup	IP address setup	IP address setup000.000.000.000*	
			IP net mask setup000.000.000.000*	
			IP gateway setup000.000.000.000*	
		TCP / IP setup	Yes* / No	
		NetWare enable	Yes* / No	
		EtherTalk enable	Yes* / No	
		NetBEUI enable	Yes* / No	
		NIC reset		
	System setup store / recall	Setup reset		
		Setup store		
		Setup value recall		
	Soft key	PS3 expansion kit soft input		
		Network scanner expansion kit soft key input		

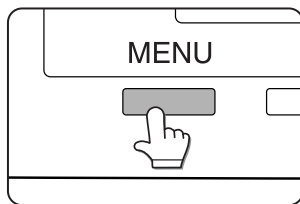
8. Canceling a print job and deleting print data

- To cancel a print job in progress and delete the print data:
Press the [BACK/CLEAR] key during printing. Printing will stop and a message asking for confirmation to delete the job will appear.
To delete the data, press the [OK] key.
To cancel deletion, press the [BACK/CLEAR] key. Printing will resume.
- To delete print data of a reserved job (that waits for printing):
Print data transmitted from computers will be stored in this printer (up to 99 jobs) and will be output sequentially. To delete print data of a reserved job before starting printing, press the [△] or [▽] key to display the desired data in the message display.
If you press the [BACK/CLEAR] key at this time, a confirmation message for deletion will appear. To delete the data, press the [OK] key.
To cancel deletion, press the [BACK/CLEAR] key. Printing will resume.

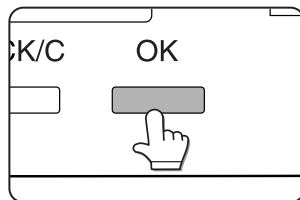
9. Setting the paper size and type

When the paper size or type is changed in a paper tray, set them referring to the following procedure.

- 1) Press the [MENU] key repeatedly until "CUSTOM SETTINGS" appears in the message display.



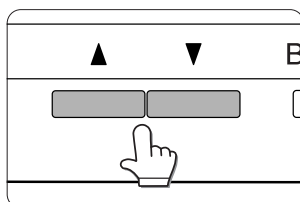
- 2) Press the [OK] key.
When the [OK] key is pressed, "TRAY SETTING" will appear in the message display.



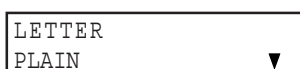
- 3) Press the [OK] key.
When the [OK] key is pressed, the message shown to the left will appear in the message display.



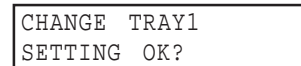
- 4) Select the desired paper tray.
Press the [△] or [▽] key repeatedly until the desired paper tray is indicated in the display.



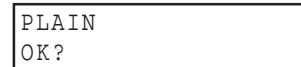
- 5) Press the [OK] key.
The paper size and paper type of the tray selected in step 4) will appear.
- If TRAY 1 is selected in step 4), the message shown to the below will appear in the display.



- 6) Press the [▽] key.
•If TRAY 1 is selected in step 4), the message shown to the left will appear in the display.



- 7) Press the [OK] key.
To cancel the setting change, press the [BACK/C] key to return to step 4).
- NOTE: Special paper such as thick paper, transparency film, labels, and postcards can be set for tray 2 and the bypass tray. Envelopes can be set only for tray 2.
- 8) Select the paper type that has been set in the tray.
Press the [△] or [▽] key repeatedly until the paper type that has been set appears.



- 9) Press the [OK] key.
- 10) Ensure that the desired paper size is selected.
•Press the [△] or [▽] key repeatedly until the desired paper size appears.



- Depending on the selected tray, a selection for "AUTO-AB" and "AUTO-INCH" may appear
"AUTO-AB": Select when you have set AB system paper.
"AUTO-INCH": Select when you have set inch system paper.
When the paper system is changed from the inch system to the AB system or vice versa, the paper type must be designated. Select the paper type.
- If you have set paper of non-standard size, select "NON STANDARD".
This size can be selected when tray 2 or the bypass tray has been selected in step 4).

- 11) Press the [OK] key to terminate the setting.

10. Specifications of paper trays

The specifications for types and sizes of paper for loading paper trays are shown below.

Tray		Tray No. (tray name)	Applicable paper types		Applicable paper sizes	Paper weight
Paper tray 1		Tray 1	Plain paper (Refer to the next page for applicable papers.)		•8-1/2 x 11, A4, B5	16 to 28 lbs. or 60 to 105g/m ²
Multi purpose drawer/ bypass tray		Tray 2/ bypass tray	Plain paper (Refer to the next page for applicable papers.)		•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2R •If "AUTO-AB" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: A3, B4, A4, A4R, B5, B5R, A5R, 8-1/2 x 13 •Non-standard sizes	16 to 34 lbs. or 60 to 128g/m ²
			Special paper (Refer to the next page for applicable papers.)	•Thick paper •Labels, transparency film	•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 8-1/2 x 11, 8-1/2 x 11R •If "AUTO-AB" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: A4, A4R, B5, B5R •Non-standard sizes smaller than 8-1/2 x 11 or A4	See the remarks for special paper
				Postcard	•Japanese official postcard	
				Envelopes can only be fed from the multi-purpose drawer. Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90g/m ²		
Stand/3 x 500 sheet paper drawer	Upper	Tray 2	Same as multi purpose drawer			
	Middle	Tray 3	Plain paper (Refer to the next page for applicable papers.)		•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2R •If "AUTO-AB" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: A3, B4, A4, A4R, B5, B5R, A5R, 8-1/2 x 13	16 to 28 lbs. or 60 to 105g/m ²
	Lower	Tray 4				
Stand/ MPD & 2000 sheet paper drawer	Upper	Tray 2	Same as multi purpose drawer			
	Lower	Tray 3	Plain paper (Refer to the next page for applicable papers.)		•8-1/2 x 11, A4	16 to 28 lbs. or 60 to 105g/m ²

A. Applicable plain paper

For satisfactory results, plain paper must conform to the following requirement

	Paper in AB system	Paper in inch system
	A5 to A3	5-1/2 x 8-1/2 to 11 x 17
Plain paper	16 to 28 lbs. or 60 to 105g/m²	
Recycled, colored, pre-punched, pre-printed and letterhead papers must conform to the same conditions as above.		

B. Applicable special paper

For satisfactory results, special paper must conform to the following requirements.

	Type	Remarks
Special paper	Thick paper	<ul style="list-style-type: none">•For 5-1/2 x 8-1/2 to 8-1/2 x 11 or A5 to A4 sizes, thick paper ranging from 16 to 34 lbs. or 60 to 128g/m² can be used.•For sizes larger than 8-1/2 x 11 or A4, thick paper ranging from 16 to 28 lbs. or 60 to 105g/m² can be used.•Other thick papers Index stock (65 lbs. or 176g/m²) can be used. Cover stock (110 lbs. or 200 to 205g/m²) can be used but only for 8-1/2 x 11, A4 or smaller paper in the portrait orientation.
	Transparency film, labels, and tracing paper	<ul style="list-style-type: none">•Use SHARP recommended paper. Do not use labels other than SHARP recommended labels. Doing so may leave adhesive residue in the printer, causing paper misfeeds, smudges on prints or other machine trouble.
	Postcards	<ul style="list-style-type: none">•Japanese official postcards can be used.
	Envelopes	<ul style="list-style-type: none">•Applicable standard envelopes: COM-10, Monarch, DL, C5, ISO B5•Envelopes can only be fed from the multi-purpose drawer.•Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90g/m².

[9] ADJUSTMENTS

		Contents of adjustment	
1	Process section	A	Doctor gap adjustment
		B	MG roller main pole position adjustment
		C	High voltage output check and adjustment
2	Engine	A	LSU right-angle adjustment
		B	Print magnification ratio adjustment
		C	Print off-center adjustment
		D	Self print lead edge adjustment
		E	Void area adjustment
		F	Resist quantity adjustment
		G	Option paper feed tray paper guide adjustment
		H	Option manual feed section paper guide position adjustment

1. Process section

A. Doctor gap adjustment

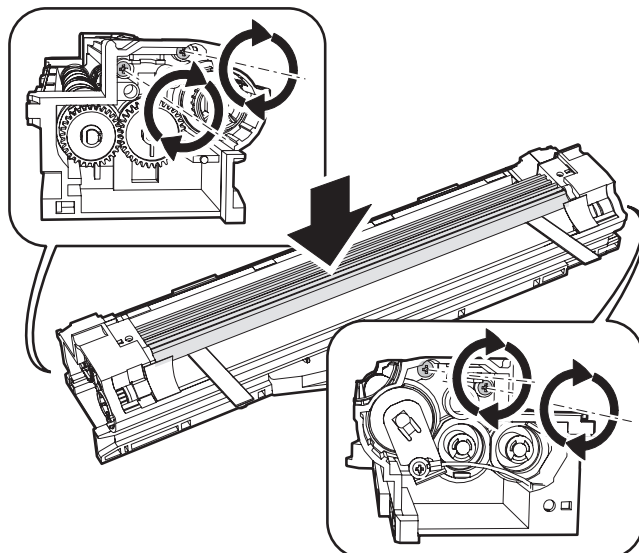
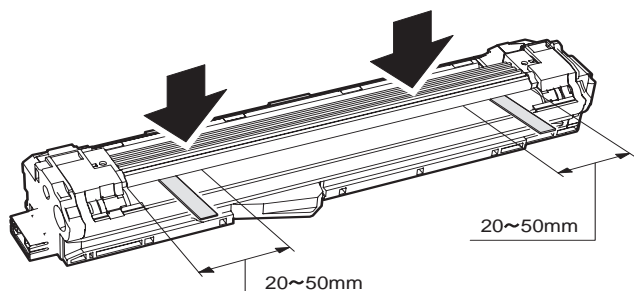
This adjustment is performed in the following cases:

- When developer is scattered.
- When an uneven image is produced.

- 1) Remove the developer cartridge and the developing unit from the machine.
- 2) Remove the DV cover and the developer from the developing unit.
- 3) Remove the DVR cover, the DVF handle, the idle correction plate assembly, and the HG gear 22T, insert a thickness gauge (0.46mm) as shown in the figure below, and check that the clearance is within the specified range.

If the clearance is not within the specified range, adjust the doctor gap in the following procedures.

- 4) Loosen the developing doctor fixing screw A.
- 5) Insert the thickness gauge (0.46mm) again as shown in the figure below.
- 6) Push the developing doctor in the arrow direction and tighten the fixing screw.
- 7) Check the developing doctor gap. If the clearance is within the specified range, fix the screw with screw lock.
- 8) After completion of the job, apply screw lock.



<Adjustment specification>

		Specification	Ambient temperature
Both sides	Position at 20 - 50mm	0.45±0.03mm	5 - 30°C

B. MG roller main pole position adjustment

This adjustment is performed in the following cases:

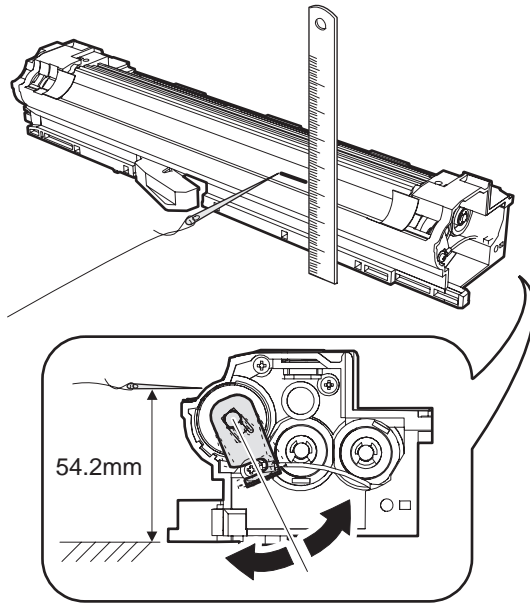
- When developer is scattered.
- When an uneven image is produced.

- 1) Remove the developer cartridge and the developing unit from the machine.
- 2) Remove the DV cover and the developer from the developing unit.
- 3) Remove the DVF handle and put the developing unit on a flat surface.
- 4) Bind a string to a needle.
- 5) Hold the string and move the needle toward the MG roller.
(Since the MG roller diameter is small, use of a clip cannot make an accurate adjustment.)
- 6) With the needle tip 2 - 3 mm apart from the MG roller surface, mark the point on the MG roller in the elongated line of the needle.
(Keep the needle and the MG roller apart from each other.)
- 7) Measure the distance from the marking position to the P surface of the developing unit, and check that the distance is within the specified range.

If the distance is not within the specified range, perform the adjustment in the following procedures.

- 8) Loosen the fixing screw of the main pole fixing plate.

- 9) Move the adjustment plate in the arrow direction and adjust.

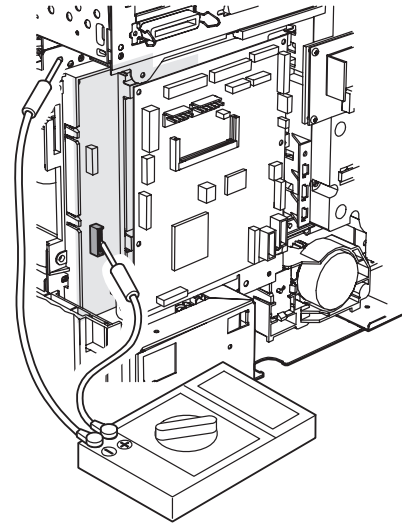


<Adjustment specification>

Marking position	Measure from the P surface above.	Specification	
		54.2mm	

C. High voltage output check and adjustment

- 1) While pressing the MENU key and the OK key, turn on the power switch.
- 2) The operation panel displays "PCU DIAG MODE."
* After releasing your fingers from the keys, do not touch any key for about 8 sec.
- 3) Press the MENU key several times until "HV TEST MC/GRID" is displayed.
- 4) Select a load to be outputted with [△] and [▽] keys.
- 5) Press the OK key to determine the selected load.
- 6) Apply the high voltage tester across the measuring pin according to the selected load and the frame.



- 7) The set value is displayed on the LCD. Check it and adjust so that it is in the specified range.

The output mode is as shown in the table below.

LCD display				Spec	Measuring pin
MC/GRID	AE	MC grid	AE mode	-650V±5V*	CN2-7
	CHR		Text mode	-650V±5V*	
	MIX		Text Photo mode	-650V±5V*	
	PHT		Photo mode	-650V±5V*	
	PRT		Printer mode	-650V±5V*	
	FAX		FX mode	-650V±5V*	
THV+	F	Transfer voltage	Front side		CN2-5
	B		Rear side		
BS	AE	Developing bias	AE mode	-500V±5V*	CN2-1
	CHR		Text mode	-500V±5V*	
	MIX		Text Photo mode	-500V±5V*	
	PHT		Photo mode	-500V±5V*	
	PRT		Printer mode	-500V±5V*	
	FAX		FX mode	-500V±5V*	
	PLUS		Positive bias	+500V±5V*	
SHV	F	Separation voltage	Front side	1.25V±0.1V	CN2-3
	R		Rear side	1.25V±0.1V	
THV		Transfer voltage discharge		-800V±10V*	CN2-5

* Varies with time by the process control process.

2. Engine

A. LSU right-angle adjustment

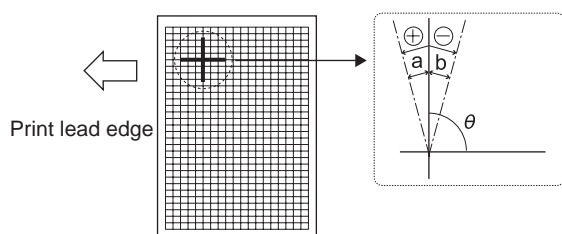
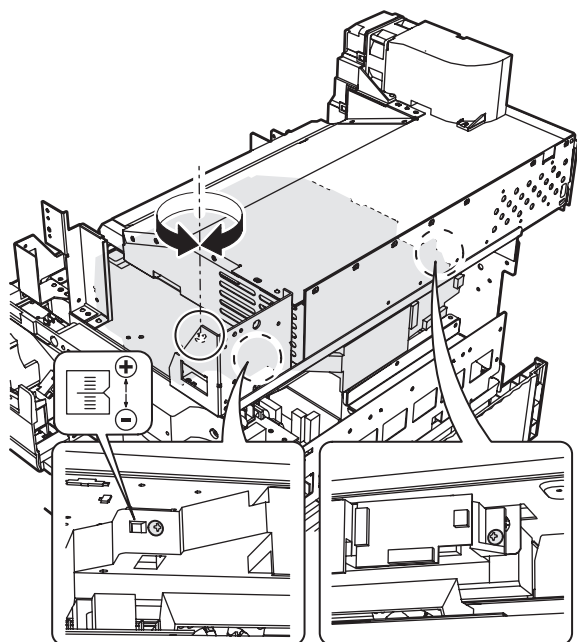
This adjustment is required in the following cases:

- When the LSU is replaced.
- When a distortion is produced in print.
(Check with self print pattern "71".)

After completion of this adjustment, the following adjustments should be performed.

- Print magnification ratio adjustment
- Print off-center adjustment
- Void area adjustment

- 1) Hold and push the [MENU] key and the [OK] key, and turn on the power. ("PCU DIAG MODE ****" is displayed.)
 - * Do not touch the keys for about 8sec after releasing fingers from the above keys.
- 2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
- 3) Push the [MENU] key several times until "PRITN PATTERN" is displayed, and set "71".
- 4) Push the [MENU] key several times until "CASSETTE" is displayed, and check with [△] key that the paper for tray 1 is properly set for the destination.
 - * AB series: "A4" is displayed
 - * Inch series: LETTER is displayed.
- 5) Push the [OK] key to make self-print.
- 6) Check the output print.
- 7) Loosen two fixing screws of the LSU unit (M4 screws which are fixing the LSU and the top plate).
- 8) Turn the adjustment screw on the upper side (on the back of the printer operation panel) clockwise or counterclockwise to adjust the height of the LSU front side.
- 9) After completion of the adjustment, tighten two fixing screws of the LSU unit.
- 10) Print again in the grid pattern and check the print.
- 11) Repeat procedures 7) to 10) until the specification is satisfied.



<Specification>

	Measuring point	Specification	Set value
Print distortion adjustment	Self print pattern 71	$\theta = 90^\circ \pm 0.13^\circ$	θ changes about 0.25 degrees for 1 scale of adjustment.

B. Print off-center adjustment

This adjustment is performed in the following cases:

- When the center of print is misaligned.
(Check with the self print pattern "1".)
- When the LSU is replaced.
- When the option paper feed unit or the automatic duplex unit is installed or replaced.

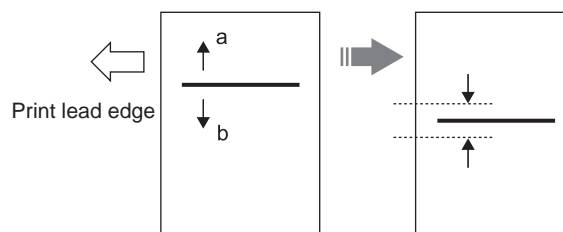
Before executing this adjustment, the following adjustments must have been completed.

- LSU right-angle adjustment
- Print magnification ratio adjustment

After completion of this adjustment, the following adjustment must be performed.

- Void area adjustment

- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)
 - * Do not touch the keys for about 8sec after releasing fingers from the above keys.
- 2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
- 3) Make a print with "1".
- 4) Push the [MENU] key several times until T1 OFF CENTER ADJ is displayed, and push the [OK] key.
- 5) Check the print and use [△] or [▽] key to adjust the value of T1 OFF CENTER ADJ so that the off-center value is within the specified range.
- 6) If the option paper feed unit or the automatic duplex unit is installed, make an adjustment for each unit.
 - * When using the duplex unit, set DUPLEX to USE.



	Measurement reference	Specification	Set value	
Standard tray self print off-center (T1 OFF CENTER ADJ)	Output pattern 1 Center line	$0 \pm 1.5\text{mm}$	Shift of 0.1mm for set value 1.	When the option paper feed unit is installed.
No. 2 tray self print off-center (T2 OFF CENTER ADJ)				
No. 3 tray self print off-center (T3 OFF CENTER ADJ)				
No. 4 tray self print off-center (T4 OFF CENTER ADJ)				
Manual feed tray self print off-center (MFT OFF CENTER ADJ)		$0 \pm 1.5\text{mm}$		When the option automatic duplex unit is installed.
ADU Self print off-center (ADU OFF CENTER ADJ)				

When the print line is shifted toward a from the paper center, decrease the value.

When the print line is shifted toward b from the paper center, increase the value.

C. Self print lead edge adjustment

This adjustment is performed in the following cases:

- When the print start position is improper.
(Check with the self print pattern "1".)
- When the LSU is replaced.

Before executing this adjustment, the following adjustments must have been completed.

- LSU right-angle adjustment
- Print magnification ratio adjustment

After completion of this adjustment, the following adjustment must be performed.

- Void area adjustment

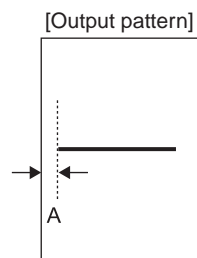
- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)
* Do not touch the keys for about 8sec after releasing fingers from the above keys.
- 2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
- 3) Make a print with "1".
- 4) Push the [MENU] key several times until LEAD EDGE is displayed, and push the [OK] key.
- 5) Check the print and use [△] or [▽] key to adjust the value LEAD EDGE so that the distance A shown in the figure below is within the specified range.
- 6) Check that the print lead edge is within the specified range.

<Specification>

	Set position	Specification	Set value
Self print lead edge adjustment (LEAD EDGE)	Print start position A of the output pattern 1	A = 4.0mm or less (FR total: 8.0mm or less)	Shift of 0.175mm (35ppm) / 0.225mm (45ppm) for set value 1.

To increase the print lead edge, decrease the set value with [▽] key.

To decrease the print lead edge, increase the set value with [△] key.



D. Void area adjustment

This adjustment is performed in the following cases:

- When the print start position is improper.
(Check with the self print pattern "71".)
- When the LSU is replaced.

Before executing this adjustment, the following adjustments must have been completed.

- LSU right-angle adjustment
- Print magnification ratio adjustment
- Print off-center adjustment

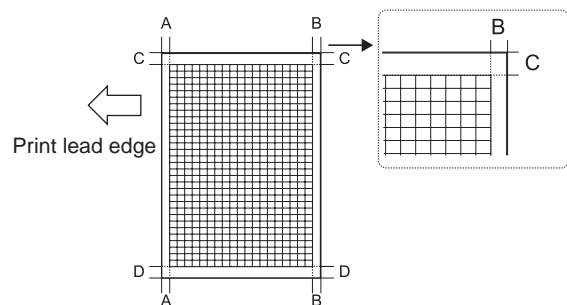
- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)
* Do not touch the keys for about 8sec after releasing fingers from the above keys.
- 2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
- 3) Make a print with "71".
- 4) Push the [MENU] key several times until LEAD EDGE VOID is displayed, and push the [OK] key.
- 5) Check the print and use [△] or [▽] key to adjust the value LEAD EDGE VOID so that the distance A shown in the figure below is within the specified range.
- 6) Push the [MENU] key several times until TAIL EDGE VOID is displayed, and push the [OK] key to make a self print.
- 7) Check the self print and use [△] or [▽] key to adjust the value of TAIL EDGE VOID so that the distance B in the figure below is within the specified range.
- 8) Push the [MENU] key several times to display SIDE EDGE VOID, and push the [OK] key to make a self print.
- 9) Check the self print and use [△] or [▽] key to adjust the value of SIDE EDGE VOID so that the total of distances C and D in the figure below is within the specified range.
- 10) Check that the lead edge is within the specified range.

<Specification>

	Measuring point	Specification	Set value
Lead edge void adjustment (LEAD EDGE VOID)	Output pattern 71 print void A	A = 4.0mm or less (Total of A and B = 8.0mm or less)	Shift of 0.1 mm for set value 1.
Rear edge void adjustment (TAIL EDGE VOID)	Output pattern 71 print void B	B = 4.0mm or less (Total of A and B = 8.0mm or less)	
Side edge void adjustment (SIDE EDGE VOID)	Output pattern 71 print void C-D	Total of C and D = 8.0mm or less	

To decrease the void quantity, decrease the set value with [▽] key.

To increase the void quantity, increase the set value with [△] key.



E. Resist quantity adjustment

This adjustment is performed in the following cases:

- When the void quantity is changed by the paper feed tray.
- When paper feed skew occurs.

Before executing this adjustment, the following adjustments must have been completed.

- LSU right-angle adjustment
- Print magnification ratio adjustment
- Print off-center adjustment
- Void area adjustment

- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)

* Do not touch the keys for about 8sec after releasing fingers from the above keys.

- 2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.

- 3) Make a print with "71" from each paper feed tray.

- 4) Push the [MENU] key several times until PAPER BUCKLE is displayed.

Adjust the resist quantity so that paper is transported normally.

<Factory setup>

PAPER BUCKLE	45CPM	MFT	60
		T1	70
		T2	55
		T3	55
		T4	60
	35CPM	MFT	65
		T1	75
		T2	60
		T3	60
		T4	65

F. Option paper feed tray paper guide adjustment

This adjustment is performed in the following cases:

- When the option paper feed tray is installed.
- When the paper size detection fails.

- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)

* Do not touch the keys for about 8sec after releasing fingers from the above keys.

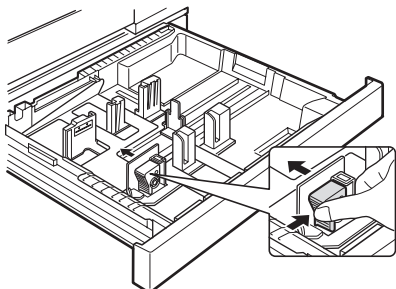
- 2) Push the [MENU] key several times until "SIZE ADJUSTMENT A" is displayed, and push the [OK] key.

- 3) "MAXIMUM SIZE" is displayed on the LCD.

Pull out the cassette, open the paper guide to the maximum, return the cassette to the machine, and push the [OK] key.

- 4) "MINIMUM SIZE" is displayed on the LCD.

Pull out the cassette again from the machine, close the paper guide to the minimum, return the cassette to the machine, and push the [OK] key.



G. Manual feed section

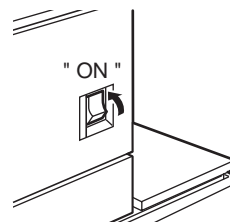
paper guide position adjustment

This adjustment is performed in the following cases:

- When the duplex unit with the manual feed unit is installed.
- When the manual feed tray paper size detection fails.

- 1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ****" is displayed.)

* Do not touch the keys for about 8sec after releasing fingers from the above keys.



- 2) Push the [MENU] key several times until "SIZE ADJUSTMENT A" is displayed, and push [△] key to display "SIZE ADJUSTMENT B" and push the [OK] key.

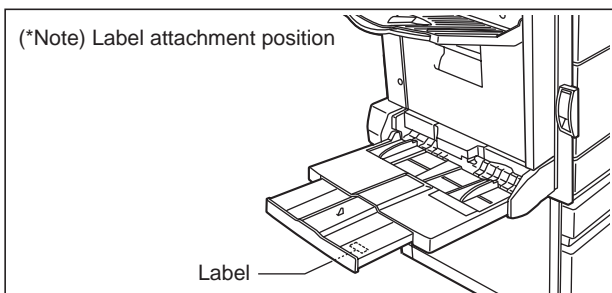
- 3) "MAXIMUM SIZE" is displayed on the LCD.

Check the value displayed with MAXIMUM SIZE. Use [△] or [▽] key to make the displayed value same as the MAX value specified on the label (* Note).

- 4) "P1 SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the P1 value specified on the label (* Note).

- 5) "P2 SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the P2 value specified on the label (* Note).

- 6) "MINIMUM SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the MIN value specified on the label (* Note).



(*Note) Label attachment position

Label

[10] DIAG

1.Diag mode

When the scanner unit is not installed, the machine can be checked and tested with the following diag mode.

Note: If the scanner unit is installed, this mode does not work.

A. Entering the diag mode

With the power OFF, hold and press the [MENU] key and the [OK] key, and at the same time turn on the power.

B. Selecting diag menus

Press the [MENU] key to change the diag menu.

*Press the [OK] key to execute the test.

*Press [△] or [▽] key to go to the input menu.

*Press the [BACK/C] key to return to the previous menu.

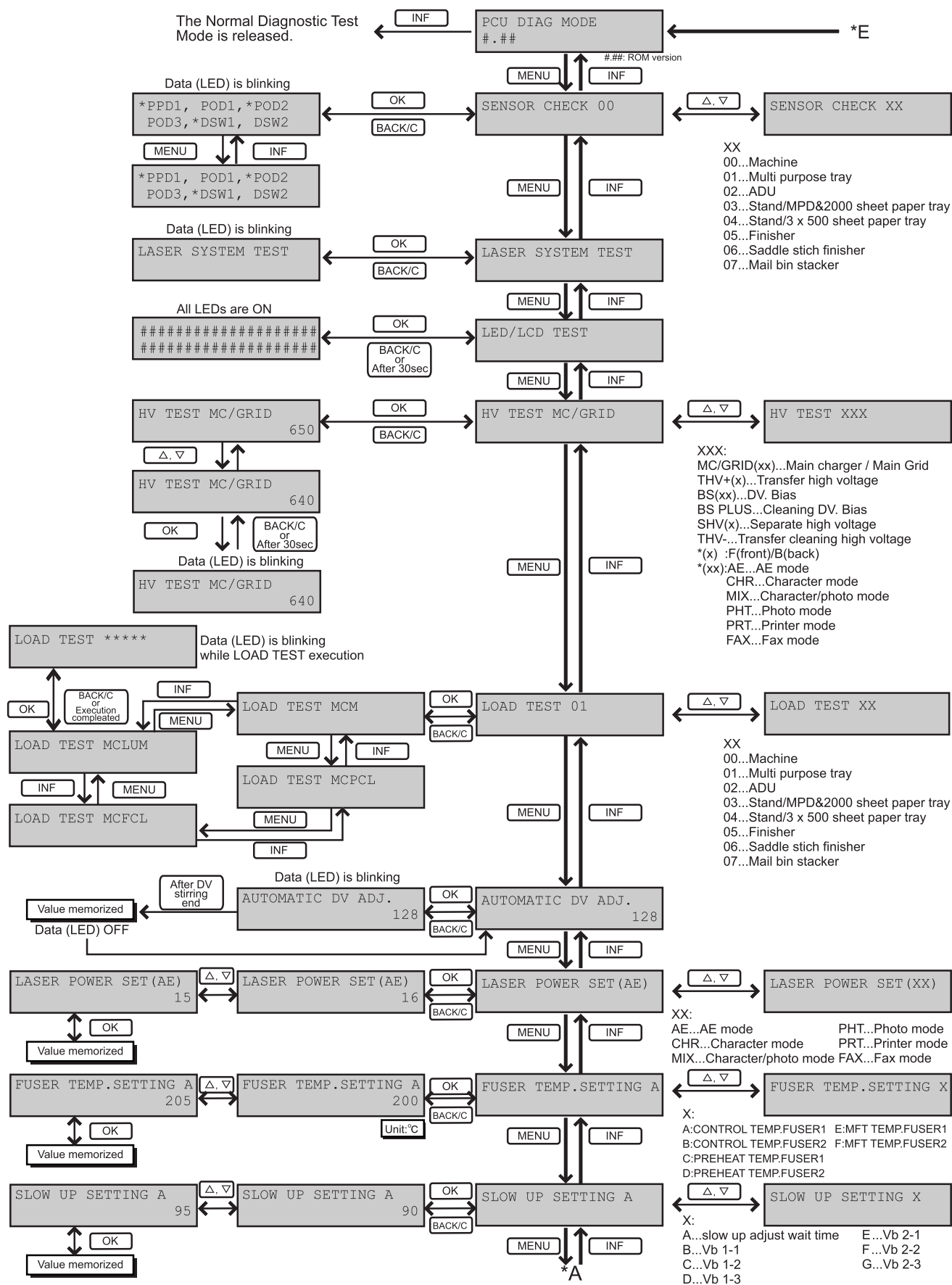
C. Canceling the diag mode

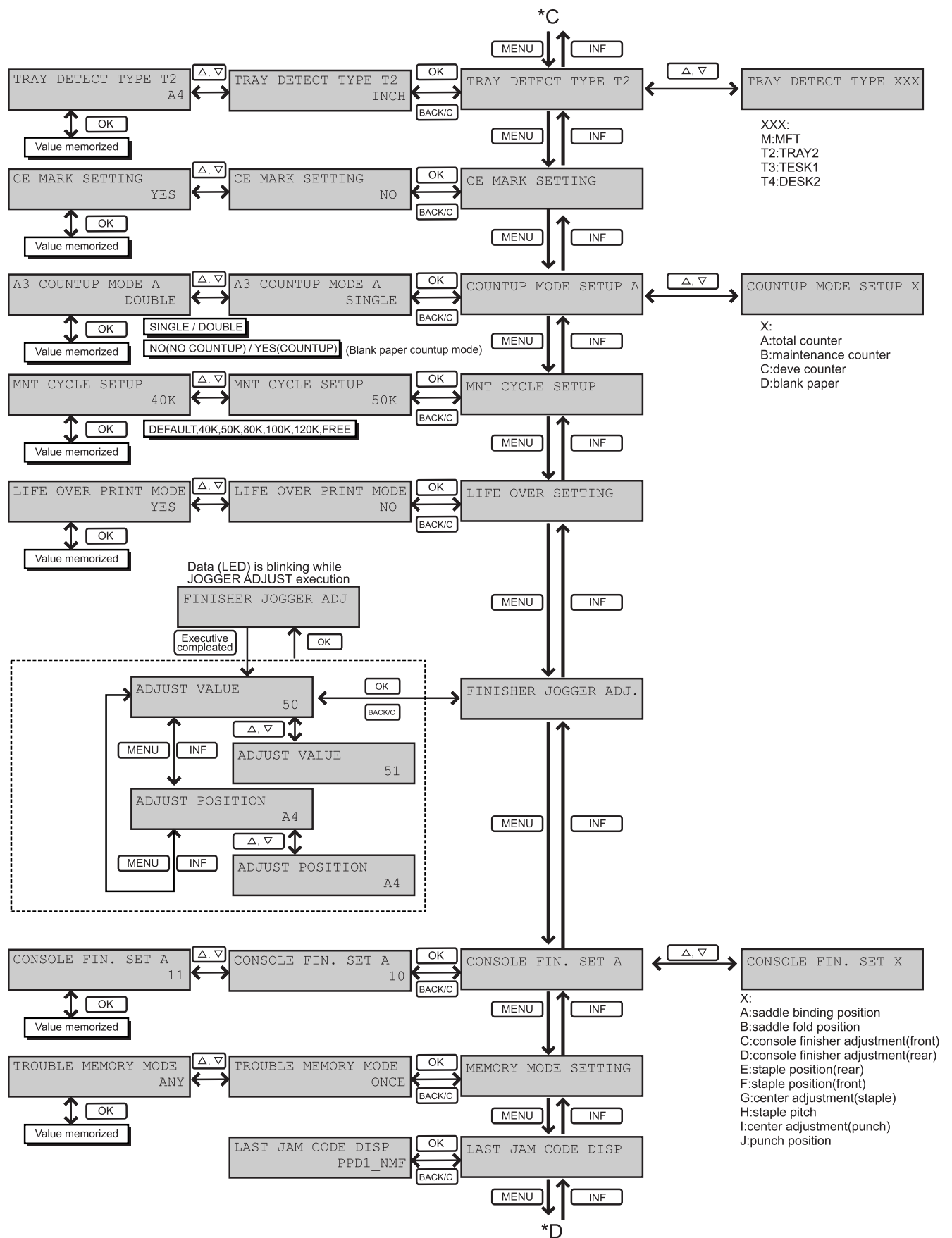
Power OFF/ON.

D. Diag mode list

Menu	LCD display
Diag mode initial display	PCU DIAG MODE #
Sensor check mode	SENSOR CHECK XX
LSU test	LASER SYSTEM TEST
LED/LCD test	LED/LCD TEST
High voltage test	HV TEST XXX
Operation test mode	LOAD TEST XX
Auto developer adjustment	AUTOMATIC DV ADJ.
Laser output setup	LASER OUTPUT SETUP (XXX)
Fusing temperature setup	FUSER TEMP. SETTING X
Process control value setup	SLOW UP SETTING
Paper feed size setup	SIZE ADJUSTMENT X
ICU print mode setup	ICU PRINT MODE SET
Test print	TEST PRINT XX
Warm-up time display	WARM UP TIME DISPLAY
Counter display	COUNTER DISPLAY
Counter clear	COUNTER CLEAR
Trouble cancel	TROUBLE CANCEL X
Paper feed tray size setup	XXX SIZE SETUP
Destination setup	DESTINATION SETUP
Paper feed tray paper type setup	TRAY DETECT TYPE xx
CE mark setup	CE MARK SETTING
A3 count mode setup	COUNTUP MODE SETUP X
Maintenance cycle setup	MNT CYCLE SETUP
Operation-at-life-over setup	LIFE OVER SETTING
Finisher jogger adjustment	FINISHER JOGGER ADJ.
Console finisher setup	CONSOLE FIN. SET X
Trouble memory mode setup	MEMORY MODE SETTING
Last JAM code display	LAST JAM CODE DISP
System information display	SYSTEM INFORMATION X
Process control data display	PROCESS DATA DISP X
Port check	CENTRO PORT CHECK
SELECT IN signal setup	SELECT IN SIGNAL SET

E. Diag mode menu transition





F. Diag mode

Menu	Content	Initial value	Set range																																																																				
PCU DIAG MODE #	<p>Initial screen of the diag mode</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> PCU DIAG MODE # . ## </div> <p>*To terminate the diag mode, turn off and on the power. *PCU ROM number is displayed in the #.</p>																																																																						
SENSOR CHECK XX	<p>SENSOR Check mode. Used to check the sensors of the machine and the options. (LCD display)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> LASER SYSTEM TEST </div> <p>*Pressing [△] or [▽] key selects the sensor group for the Sensor check mode.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> *PPD1, POD1, *POD2 POD3, *DSW1, DSW2 </div> <p>*Pressing [OK] key starts the selected Sensor check. *DATA (LED) blinks during the processing *Using [MENU] moves to the next sensor data. *Pressing [BACK/C] key terminates the Sensor check Mode.</p> <p>(Selectable sensor group)</p> <p>00: Main body</p> <table border="1"> <tr> <td>PPD1</td><td>Paper entry sensor</td><td>POD1</td><td>Paper sensor 1</td></tr> <tr> <td>POD2</td><td>Paper exit sensor 2</td><td>POD3</td><td>Paper sensor 2</td></tr> <tr> <td>DSW1</td><td>Front door switch</td><td>DSW2</td><td>Left door switch</td></tr> </table> <p>01: Multi-purpose tray</p> <table border="1"> <tr> <td>MCSSET</td><td>Multi-purpose connection detection</td><td>MCDRS</td><td>Left side door SW</td></tr> <tr> <td>MCSS4</td><td>Vertical size detection SW4</td><td>MCSS3</td><td>Vertical size detection SW3</td></tr> <tr> <td>MCSS2</td><td>Vertical size detection SW2</td><td>MCSS1</td><td>Vertical size detection SW1</td></tr> <tr> <td>MCSPD</td><td>Remaining quantity sensor</td><td>MCLUD</td><td>Lift upper limit sensor</td></tr> <tr> <td>MCPED</td><td>Paper empty sensor</td><td>MCPFD</td><td>Sensor</td></tr> </table> <p>02: ADU</p> <table border="1"> <tr> <td>MPLD1</td><td>Manual feed paper length sensor</td><td>APIND</td><td>ADU paper entry sensor</td></tr> <tr> <td>MPLS2</td><td>Tray collection sensor</td><td>APOD</td><td>ADU paper exit sensor</td></tr> <tr> <td>MPLS1</td><td>Tray pull-out sensor</td><td>APPD1</td><td>ADU transport sensor 1</td></tr> <tr> <td>MPED</td><td>Manual paper feed sensor</td><td>APPD2</td><td>ADU transport sensor 2</td></tr> </table> <p>03: Large capacity paper feed tray</p> <table border="1"> <tr> <td>DRS</td><td>Left side door SW</td><td>TSD</td><td>Tandem tray installation detection</td></tr> <tr> <td>LUD2</td><td>Tandem right tray upper limit sensor</td><td>LUD1</td><td>Tandem left tray upper limit sensor</td></tr> <tr> <td>SPD2</td><td>Tandem right tray remaining quantity sensor</td><td>SPD1</td><td>Tandem left tray remaining quantity sensor</td></tr> <tr> <td>PED2</td><td>Tandem right tray paper empty sensor</td><td>PED1</td><td>Tandem left tray paper empty sensor</td></tr> <tr> <td>PFD3</td><td>Tandem horizontal transport section transport sensor</td><td>PFD2</td><td>Tandem vertical transport section transport sensor</td></tr> </table> <p>When the specified sensor is active, " * "mark will appear before the sensor name.</p>	PPD1	Paper entry sensor	POD1	Paper sensor 1	POD2	Paper exit sensor 2	POD3	Paper sensor 2	DSW1	Front door switch	DSW2	Left door switch	MCSSET	Multi-purpose connection detection	MCDRS	Left side door SW	MCSS4	Vertical size detection SW4	MCSS3	Vertical size detection SW3	MCSS2	Vertical size detection SW2	MCSS1	Vertical size detection SW1	MCSPD	Remaining quantity sensor	MCLUD	Lift upper limit sensor	MCPED	Paper empty sensor	MCPFD	Sensor	MPLD1	Manual feed paper length sensor	APIND	ADU paper entry sensor	MPLS2	Tray collection sensor	APOD	ADU paper exit sensor	MPLS1	Tray pull-out sensor	APPD1	ADU transport sensor 1	MPED	Manual paper feed sensor	APPD2	ADU transport sensor 2	DRS	Left side door SW	TSD	Tandem tray installation detection	LUD2	Tandem right tray upper limit sensor	LUD1	Tandem left tray upper limit sensor	SPD2	Tandem right tray remaining quantity sensor	SPD1	Tandem left tray remaining quantity sensor	PED2	Tandem right tray paper empty sensor	PED1	Tandem left tray paper empty sensor	PFD3	Tandem horizontal transport section transport sensor	PFD2	Tandem vertical transport section transport sensor		
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MCSS2	Vertical size detection SW2	MCSS1	Vertical size detection SW1																																																																				
MCSPD	Remaining quantity sensor	MCLUD	Lift upper limit sensor																																																																				
MCPED	Paper empty sensor	MCPFD	Sensor																																																																				
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Menu	Content	Initial value	Set range																																																																																																																																												
SENSOR CHECK XX	<p>SENSOR Check mode. Used to check the sensors of the machine and the options.</p> <p>(Selectable sensor group)</p> <p>04: 3-tray paper feed unit</p> <table border="1"> <tr> <td>DRS</td><td>Left side door SW</td><td>SPD2</td><td>Multi-stage desk lower tray remaining quantity sensor</td></tr> <tr> <td>SPD1</td><td>Multi-stage desk upper tray remaining quantity sensor</td><td>CSS24</td><td>Multi-stage desk lower tray vertical size detection SW4</td></tr> <tr> <td>CSS23</td><td>Multi-stage desk lower tray vertical size detection SW3</td><td>CSS22</td><td>Multi-stage desk lower tray vertical size detection SW2</td></tr> <tr> <td>CSS21</td><td>Multi-stage desk lower tray vertical size detection SW1</td><td>LUD2</td><td>Multi-stage desk upper tray lift upper limit sensor</td></tr> <tr> <td>PED2</td><td>Multi-stage desk lower tray paper empty sensor</td><td>PFD3</td><td>Multi-stage desk lower tray transport (paper detection) sensor</td></tr> <tr> <td>CSS14</td><td>Multi-stage desk upper tray vertical size sensor</td><td>CSS13</td><td>Multi-stage desk upper tray vertical size sensor</td></tr> <tr> <td>CSS12</td><td>Multi-stage desk upper tray vertical size sensor</td><td>CSS11</td><td>Multi-stage desk upper tray vertical size sensor</td></tr> <tr> <td>LUD1</td><td>Multi-stage desk upper tray lift upper limit sensor</td><td>PED1</td><td>Multi-stage desk upper tray paper empty sensor</td></tr> <tr> <td>LUD1</td><td>Multi-stage desk upper tray lift upper limit sensor</td><td></td><td></td></tr> </table> <p>05: Finisher</p> <table border="1"> <tr> <td>STHP</td><td>Stapler home position sensor</td><td>PSHP</td><td>Pusher home position sensor</td></tr> <tr> <td>POD</td><td>Paper exit sensor</td><td>PPD</td><td>Paper hold return sensor</td></tr> <tr> <td>SCID</td><td>Staple paper entry sensor</td><td>DSW2</td><td>Front door open/close sensor</td></tr> <tr> <td>PID</td><td>Paper entry sensor</td><td>DSW1</td><td>Right upper door open/close sensor</td></tr> <tr> <td>T2PD</td><td>Offset tray paper sensor</td><td>24VM</td><td>24V supply monitor signal</td></tr> <tr> <td>T2DN</td><td>Offset tray lower limit sensor</td><td>T1PF</td><td>Upper tray full sensor</td></tr> <tr> <td>T2UP</td><td>Offset tray upper limit sensor</td><td>STSP</td><td>Stapler staple ready sensor</td></tr> <tr> <td>JRHP</td><td>Jogger R home position sensor</td><td>STLS</td><td>Stapler staple empty sensor</td></tr> <tr> <td>JFHP</td><td>Jogger F home position sensor</td><td>STNC</td><td>Stapler cartridge empty sensor</td></tr> <tr> <td>SCID2</td><td>Staple paper entry sensor 2</td><td>DOPD</td><td>Upper cover open/close sensor</td></tr> <tr> <td>STHP2</td><td>Staple rotation home position sensor</td><td>MMLK</td><td>Main motor lock signal</td></tr> <tr> <td>STHP1</td><td>Staple rotation home position sensor</td><td>SCPD</td><td>Paper sensor</td></tr> <tr> <td>STUHP</td><td>Staple shift home position sensor</td><td></td><td></td></tr> </table> <p>06: Saddle finisher</p> <table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table> <p>07: Male bin stacker</p> <table border="1"> <tr> <td>24MV</td><td>24V detection</td><td>PFD1</td><td>Paper exit full sensor 1</td></tr> <tr> <td>DD1</td><td>Front cover open/close sensor</td><td>PFD2</td><td>Paper exit full sensor 2</td></tr> <tr> <td>DOPD</td><td>Upper cover open/close sensor</td><td>PFD3</td><td>Paper exit full sensor 3</td></tr> <tr> <td>PID</td><td>Paper entry sensor</td><td>PFD4</td><td>Paper exit full sensor 4</td></tr> <tr> <td>PPD1</td><td>Transport sensor 1</td><td>PFD5</td><td>Paper exit full sensor 5</td></tr> <tr> <td>PPD2</td><td>Transport sensor 2</td><td>PFD6</td><td>Paper exit full sensor 6</td></tr> <tr> <td>PPD3</td><td>Transport sensor 3</td><td>PFD7</td><td>Paper exit full sensor 7</td></tr> <tr> <td>PPD4</td><td>Transport sensor 4</td><td>PFD8</td><td>Paper exit full sensor 8</td></tr> <tr> <td>PPD5</td><td>Transport sensor 5</td><td></td><td></td></tr> </table> <p>When the specified sensor is active, " * "mark will appear before the sensor name.</p>	DRS	Left side door SW	SPD2	Multi-stage desk lower tray remaining quantity sensor	SPD1	Multi-stage desk upper tray remaining quantity sensor	CSS24	Multi-stage desk lower tray vertical size detection SW4	CSS23	Multi-stage desk lower tray vertical size detection SW3	CSS22	Multi-stage desk lower tray vertical size detection SW2	CSS21	Multi-stage desk lower tray vertical size detection SW1	LUD2	Multi-stage desk upper tray lift upper limit sensor	PED2	Multi-stage desk lower tray paper empty sensor	PFD3	Multi-stage desk lower tray transport (paper detection) sensor	CSS14	Multi-stage desk upper tray vertical size sensor	CSS13	Multi-stage desk upper tray vertical size sensor	CSS12	Multi-stage desk upper tray vertical size sensor	CSS11	Multi-stage desk upper tray vertical size sensor	LUD1	Multi-stage desk upper tray lift upper limit sensor	PED1	Multi-stage desk upper tray paper empty sensor	LUD1	Multi-stage desk upper tray lift upper limit sensor			STHP	Stapler home position sensor	PSHP	Pusher home position sensor	POD	Paper exit sensor	PPD	Paper hold return sensor	SCID	Staple paper entry sensor	DSW2	Front door open/close sensor	PID	Paper entry sensor	DSW1	Right upper door open/close sensor	T2PD	Offset tray paper sensor	24VM	24V supply monitor signal	T2DN	Offset tray lower limit sensor	T1PF	Upper tray full sensor	T2UP	Offset tray upper limit sensor	STSP	Stapler staple ready sensor	JRHP	Jogger R home position sensor	STLS	Stapler staple empty sensor	JFHP	Jogger F home position sensor	STNC	Stapler cartridge empty sensor	SCID2	Staple paper entry sensor 2	DOPD	Upper cover open/close sensor	STHP2	Staple rotation home position sensor	MMLK	Main motor lock signal	STHP1	Staple rotation home position sensor	SCPD	Paper sensor	STUHP	Staple shift home position 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LASER SYSTEM TEST	<p>LASER System Unit test. Used to check the operation of the laser system.</p> <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 10px 0;">LASER SYSTEM TEST</div> <p>*Pressing [OK] key turns on the polygonal mirror and the laser. *DATA (LED) blinks during the processing *When the polygonal mirror does not rotate and the cover is open, ERROR LED lights up. When the HSYNC is properly detected, READY lights up.</p>																																																																																																																																														

Menu	Content	Initial value	Set range																																		
LED/LCD TEST	<p>LED/LCD display test. Used to check the lighting test of the operation panel LED and LCD.</p> <div>LED/LCD TEST</div> <p>*Pressing [OK] key lights up the all LEDs. *Test is terminated 30 seconds after, or can be terminated by pressing [BACK/C] key. (LCD display)</p> <div><div></div><div></div></div> <p>*All LCD dots will be "on" during the operation.</p>																																				
HV TEST XXX	<p>High voltage test. Used to perform the output test from the high voltage PWB. (LCD display)</p> <div>HV TEST XXX</div> <p>*Pressing [△] or [▽] key selects the high voltage unit for the testing. *Pressing [OK] key can change the selected High voltage value. *Using [△] or [▽] key changes the voltage. *Pressing [OK] key starts the High voltage output. *DATA (LED) blinks during the processing. *After 30 seconds high voltage output is terminated. *Pressing [BACK/C] key terminates the High voltage test.</p> <table><tr><td>XXX:</td><td></td></tr><tr><td>MC/GRID(xx):</td><td>Main charger / Grid bias test</td></tr><tr><td>THV+(x):</td><td>Transfer High voltage test</td></tr><tr><td>BS(xx):</td><td>Developer bias test /Volume</td></tr><tr><td>BS PLUS:</td><td>Developer bias test(cleaning mode)</td></tr><tr><td>SHV(x):</td><td>separate high voltage test</td></tr><tr><td>THV-:</td><td>transfer cleaning high voltage test</td></tr></table> <table><tr><td>X</td><td></td></tr><tr><td>F</td><td>Front</td></tr><tr><td>R</td><td>Rear</td></tr></table> <table><tr><td>XX</td><td></td></tr><tr><td>AE</td><td>AE mode</td></tr><tr><td>CHR</td><td>Text mode</td></tr><tr><td>MIX</td><td>Text/Photo mode</td></tr><tr><td>PHT</td><td>Photo mode</td></tr><tr><td>PRT</td><td>Printer mode</td></tr><tr><td>FAX</td><td>Fax mode</td></tr></table>	XXX:		MC/GRID(xx):	Main charger / Grid bias test	THV+(x):	Transfer High voltage test	BS(xx):	Developer bias test /Volume	BS PLUS:	Developer bias test(cleaning mode)	SHV(x):	separate high voltage test	THV-:	transfer cleaning high voltage test	X		F	Front	R	Rear	XX		AE	AE mode	CHR	Text mode	MIX	Text/Photo mode	PHT	Photo mode	PRT	Printer mode	FAX	Fax mode		
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Menu	Content				Initial value	Set range																																																																																																																																																																
LOAD TEST XX	<div><div><div>LOAD TEST XX</div></div></div> <p>*Pressing [△] or [▽] key selects the LOAD group for the Load Test mode.</p> <p>*Press [OK] key to determine the load operation group.</p> <p>*Press [MENU] key to select the load to be tested.</p> <p>*Pressing [OK] key starts the selected Load Test.</p> <p>*DATA (LED) blinks during the processing.</p> <p>*Pressing [BACK/C] key terminates the Load Test Mode.</p> <p>(Selectable Loads Group)</p> <p>00: Main body</p> <table><tr><td>MSWPR</td><td></td><td>VG_FAX</td><td>Grid FAX</td></tr><tr><td>HLPR</td><td></td><td>VG_PRT</td><td>Grid Printer</td></tr><tr><td>DCPR</td><td></td><td>VG_PHT</td><td>Grid Photo</td></tr><tr><td>MM</td><td>Main motor</td><td>VG_MIX</td><td>Grid Text/Photo</td></tr><tr><td>DM</td><td>Drum motor</td><td>VG_CHR</td><td>Grid Text</td></tr><tr><td>DSB_FW</td><td>Paper exit motor normal rotation</td><td>VG_AE</td><td>Grid AE</td></tr><tr><td>DSB_RV</td><td>Paper exit motor reverse rotation</td><td>THV+_BACK</td><td>Transfer voltage back</td></tr><tr><td>TM</td><td>Toner motor</td><td>THV+_FRONT</td><td>Transfer voltage front</td></tr><tr><td>CPFC</td><td>Paper cassette paper feed clutch</td><td>THV-</td><td>Transfer cleaning</td></tr><tr><td>RRC</td><td>Resist roller clutch</td><td>SHV_BACK</td><td>Separation voltage back</td></tr><tr><td>TRC</td><td>Paper transport clutch</td><td>SHV_FRONT</td><td>Separation voltage front</td></tr><tr><td>FGS_FIN</td><td></td><td></td><td></td></tr><tr><td>TRC_DSK</td><td>Paper transport desk</td><td></td><td></td></tr><tr><td>LUM</td><td>Lift-up motor</td><td></td><td></td></tr><tr><td>HL1</td><td>Fusing lamp 1</td><td></td><td></td></tr><tr><td>HL2</td><td>Fusing lamp 2</td><td></td><td></td></tr><tr><td>BS_PLUS</td><td>Developing bias</td><td></td><td></td></tr><tr><td>BS_FAX</td><td>Developing bias (FAX)</td><td></td><td></td></tr><tr><td>BS_PRT</td><td>Developing bias (Printer)</td><td></td><td></td></tr><tr><td>BS_PHT</td><td>Developing bias (Photo)</td><td></td><td></td></tr><tr><td>BS_MIX</td><td>Developing bias (Text/Photo)</td><td></td><td></td></tr><tr><td>BS_CHR</td><td>Developing bias (Text)</td><td></td><td></td></tr><tr><td>BS_AE</td><td>Developing bias (AE)</td><td></td><td></td></tr><tr><td>FMHi</td><td>Fan motor high speed</td><td></td><td></td></tr><tr><td>FMLo</td><td>Fan motor low speed</td><td></td><td></td></tr><tr><td>PSPS</td><td>Separation solenoid</td><td></td><td></td></tr></table> <p>01: Multi-purpose tray</p> <table><tr><td>MCM</td><td>MP tray drive motor control</td><td>MCPCL</td><td>MP tray paper feed clutch</td></tr><tr><td>MCFL</td><td>MP tray transport clutch</td><td>MCULM</td><td>MP lift-up motor</td></tr></table> <p>02: ADU (Manual paper feed section)</p> <table><tr><td>MPFS</td><td>Manual paper feed solenoid</td><td>MSS</td><td>Shutter solenoid</td></tr><tr><td>MPFC</td><td>Manual paper feed clutch</td><td></td><td></td></tr></table> <p>03: ADU</p> <table><tr><td>ADMEN1</td><td>Upper transport motor</td><td>DGS</td><td>Gate solenoid</td></tr><tr><td>ADMEN2</td><td>Lower transport motor</td><td></td><td></td></tr></table> <p>04: Large capacity paper feed tray</p> <table><tr><td>TLUM2</td><td>Tandem right tray lift-up motor</td><td>TLUM1</td><td>Tandem left tray lift-up motor</td></tr><tr><td>L_MCLM</td><td>Multi-purpose tray lift-up motor</td><td>TPFCL</td><td>Transport clutch</td></tr><tr><td>TPCL2</td><td>Tandem right tray paper feed clutch</td><td>TPCL1</td><td>Tandem left tray paper feed clutch</td></tr><tr><td>L_MCPCL</td><td>Multi-purpose tray paper feed clutch</td><td>TMM</td><td>Transport motor</td></tr></table> <p>05: 3-stage paper feed desk</p> <table><tr><td>DLUM2</td><td>Multi-stage desk lower tray lift-up motor</td><td>DLUM1</td><td>Multi-stage desk upper tray lift-up motor</td></tr><tr><td>D_MCLM</td><td>Multi-purpose tray lift-up 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(Printer)			BS_PHT	Developing bias (Photo)			BS_MIX	Developing bias (Text/Photo)			BS_CHR	Developing bias (Text)			BS_AE	Developing bias (AE)			FMHi	Fan motor high speed			FMLo	Fan motor low speed			PSPS	Separation solenoid			MCM	MP tray drive motor control	MCPCL	MP tray paper feed clutch	MCFL	MP tray transport clutch	MCULM	MP lift-up motor	MPFS	Manual paper feed solenoid	MSS	Shutter solenoid	MPFC	Manual paper feed clutch			ADMEN1	Upper transport motor	DGS	Gate solenoid	ADMEN2	Lower transport motor			TLUM2	Tandem right tray lift-up motor	TLUM1	Tandem left tray lift-up motor	L_MCLM	Multi-purpose tray lift-up motor	TPFCL	Transport clutch	TPCL2	Tandem right tray paper feed clutch	TPCL1	Tandem left tray paper feed clutch	L_MCPCL	Multi-purpose tray paper feed clutch	TMM	Transport motor	DLUM2	Multi-stage desk lower tray lift-up motor	DLUM1	Multi-stage desk upper tray lift-up motor	D_MCLM	Multi-purpose tray lift-up motor	DPFCL	Transport clutch	DPCL2	Multi-stage desk lower tray paper feed 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AUTOMATIC DV ADJ.	<p>Automatic DV adjustment. Used to perform the auto developer adjustment. (LCD display)</p> <div><div>AUTOMATIC DV ADJ.</div><div>128</div></div> <p>*Pressing [OK] key starts the automatic DV adjustment. *Toner control sensor value is displayed in the LCD during the operation. *DATA (LED) blinks during the processing *When adjustment error occurred, ERROR LED lights up. *Adjustment value is memorized after 2 minutes DV stirring. *Pressing [BACK/C] key terminates the adjustment mode.</p>																																																																		
LASER OUTPUT SETUP (XXX)	<p>Laser output setup. Used to set the laser output value.</p> <div>Note: Do not change the factory setup on the laser output.</div> <p>(LCD display)</p> <div>LASER POWER SET (XX)</div> <p>*Pressing [△] or [▽] key selects the LASER OUTPUT SETUP mode. *Pressing [OK] key starts the laser output setup. *Using [△] or [▽] key changes the value. *Pressing [OK]key memorize the value. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>XX</td><td></td></tr><tr><td>AE</td><td>AE mode</td></tr><tr><td>CHR</td><td>Text mode</td></tr><tr><td>MIX</td><td>Text/Photo mode</td></tr><tr><td>PHT</td><td>Photo mode</td></tr><tr><td>PRT</td><td>Printer mode</td></tr><tr><td>FAX</td><td>Fax mode</td></tr></table>	XX		AE	AE mode	CHR	Text mode	MIX	Text/Photo mode	PHT	Photo mode	PRT	Printer mode	FAX	Fax mode																																																				
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FUSER control temperature setting X	<p>Fuser control Temperature setting. Used to set the fusing temperature. (LCD display)</p> <div>FUSER TEMP.SETTING X</div> <p>*Using [△] or [▽] key select the thermistor. *Pressing [OK] key starts the setting. *Using [△] or [▽] key changes the value. *Pressing [OK] key memorize the value. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>control temperature FUSER 1</td></tr><tr><td>B:</td><td>control temperature FUSER 2</td></tr><tr><td>C:</td><td>preheat temperature FUSER 1</td></tr><tr><td>D:</td><td>preheat temperature FUSER 2</td></tr><tr><td>E:</td><td>Bypass tray control temperature FUSER 1</td></tr><tr><td>F:</td><td>Bypass tray control temperature FUSER 2</td></tr></table>	X:		A:	control temperature FUSER 1	B:	control temperature FUSER 2	C:	preheat temperature FUSER 1	D:	preheat temperature FUSER 2	E:	Bypass tray control temperature FUSER 1	F:	Bypass tray control temperature FUSER 2				
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F:	Bypass tray control temperature FUSER 2																		
SLOW UP SETTING	<p>Process control value setting. Used to set the process control value for each destination.</p> <div>SLOW UP SETTING X</div> <p>*Using [△] or [▽] key select the process control value. *Pressing [OK] key starts the setting. *Using [△] or [▽] key changes the value. *Pressing [OK] key memorize the value. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>slow up adjust wait time</td></tr><tr><td>B:</td><td>Vb1-1</td></tr><tr><td>C:</td><td>Vb1-2</td></tr><tr><td>D:</td><td>Vb1-3</td></tr><tr><td>E:</td><td>Vb2-1</td></tr><tr><td>F:</td><td>Vb2-2</td></tr><tr><td>G:</td><td>Vb2-3</td></tr></table>	X:		A:	slow up adjust wait time	B:	Vb1-1	C:	Vb1-2	D:	Vb1-3	E:	Vb2-1	F:	Vb2-2	G:	Vb2-3		
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SIZE adjstment X	<p>SIZE adjustment . Used to perform the size detection adjustment of the optional universal tray and the manual feed tray. (LCD display)</p> <div>SIZE ADJUSTMENT X</div> <p>*Using [△] or [▽] key select the tray. Pressing [OK] key enter the adjustment mode. (Selectable modes)</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>A3 Universal tray adjustment</td></tr><tr><td>B:</td><td>Bypass tray setting</td></tr><tr><td>C:</td><td>Bypass tray adjustment</td></tr></table> <p><select A> 1. Widen the guide to the MAXIMUM position. *Pressing [OK] key starts the adjustment. 2.Narrow the guide to the MINIMUM position. *Pressing [OK] key starts the adjustment. *Pressing [BACK/C] key terminates the setting. <select B> *Pressing [OK] key displays the adjustment value. *Using [△] and [▽] keys changes the value. *Pressing [OK] key set the changes of the value, and moves to the next mode *Pressing [BACK/C] key terminates the setting. <select C> 1. Widen the guide to the MAXIMUM position. *Pressing [OK] key starts the adjustment. 2.Guide to the P1 position. *Pressing [OK] key starts the adjustment. 3.Guide to the P2 position. *Pressing [OK] key starts the adjustment. 4.Narrow the guide to the MINIMUM position. *Pressing [OK] key starts the adjustment. *Pressing [BACK/C] key terminates the setting.</p>	X:		A:	A3 Universal tray adjustment	B:	Bypass tray setting	C:	Bypass tray adjustment		
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ICU PRINT MODE SET	<p>Icu print mode setting.</p> <div>ICU PRINT MODE SET</div> <p>*Press [OK] key to start the setup mode. *Press [MENU] key to shift to the next item. *Pressing [MENU] moves to the next item *Using [△] and [▽] keys changes the mode. *Pressing [BACK/C] key releases the print mode set. *Pressing [OK] key starts the print mode set. *DATA (LED) blinks during the print mode set execution.</p>										

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TEST PRINT XX	<div><div><div>TEST PRINT 00</div></div><div><div>*Pressing [△] or [▽] key selects the mode. XX(select the number changed to decimal.)</div><div><div><div><div>7</div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div><div>0</div></div><div><div>1 : No Jam detection</div><div>1 : No Fuser Control</div><div>1 : No warm up cycle</div><div>1 : No Developer detection</div><div>1 : Aging mode</div></div></div></div></div><div><div>Aging mode:</div><table><tr><th>Set value XX</th><th>Mode</th><th>Set value XX</th><th>Mode</th></tr><tr><td>0</td><td></td><td>16</td><td>Aging mode</td></tr><tr><td>1</td><td>No jam detection</td><td>17</td><td>Aging mode + No jam detection</td></tr><tr><td>2</td><td>No fusing control</td><td>18</td><td>Aging mode + No fusing control</td></tr><tr><td>3</td><td>No fusing control + No jam detection</td><td>19</td><td>Aging mode + No fusing control + No jam detection</td></tr><tr><td>4</td><td>No warm-up cycle</td><td>20</td><td>Aging mode + No warm-up cycle</td></tr><tr><td>5</td><td>No warm-up cycle + No jam detection</td><td>21</td><td>Aging mode + No warm-up cycle No jam detection</td></tr><tr><td>6</td><td>No warm-up cycle + No fusing control</td><td>22</td><td>Aging mode + No warm-up cycle + No fusing detection</td></tr><tr><td>7</td><td>No warm-up cycle + No fusing control + No jam detection</td><td>23</td><td>Aging mode + No warm-up cycle + No fusing detection + No jam detection</td></tr><tr><td>8</td><td>No DV detection</td><td>24</td><td>Aging mode + No DV detection</td></tr><tr><td>9</td><td>No DV detection + No jam detection</td><td>25</td><td>Aging mode + No DV detection + No jam detection</td></tr><tr><td>10</td><td>No DV detection + No fusing control</td><td>26</td><td>Aging mode + No DV detection + No fusing control</td></tr><tr><td>11</td><td>No DV detection + No fusing control + No jam detection</td><td>27</td><td>Aging mode + No DV detection + No fusing control + No jam detection</td></tr><tr><td>12</td><td>No DV detection + No warm-up cycle</td><td>28</td><td>Aging mode + No DV detection + No warm-up cycle</td></tr><tr><td>13</td><td>No DV detection + No warm-up cycle + No jam detection</td><td>29</td><td>Aging mode + No DV detection + No warm-up cycle + No jam detection</td></tr><tr><td>14</td><td>No DV detection + No warm-up cycle + No fusing control</td><td>30</td><td>Aging mode + No DV detection + No warm-up cycle + No fusing control</td></tr><tr><td>15</td><td>No DV detection + No warm-up cycle + No fusing control + No jam detection</td><td>31</td><td>Aging mode + No DV detection + No warm-up cycle + No fusing control + No jam detection</td></tr></table><div><div>example: If you need "Aging mode" only, select "16". If you need "Aging mode" and "No jam detection", select "17".</div><div><div>*Pressing [OK] key displays the setting menu for printing test. *Pressing [MENU] moves to the next item *Using [△] and [▽] keys changes the mode. *Pressing [BACK/C] key releases the printing menu mode. *Pressing [OK] key starts the printing test. *DATA (LED) blinks during the TEST PRINT execution.</div></div></div></div></div>	Set value XX	Mode	Set value XX	Mode	0		16	Aging mode	1	No jam detection	17	Aging mode + No jam detection	2	No fusing control	18	Aging mode + No fusing control	3	No fusing control + No jam detection	19	Aging mode + No fusing control + No jam detection	4	No warm-up cycle	20	Aging mode + No warm-up cycle	5	No warm-up cycle + No jam detection	21	Aging mode + No warm-up cycle No jam detection	6	No warm-up cycle + No fusing control	22	Aging mode + No warm-up cycle + No fusing detection	7	No warm-up cycle + No fusing control + No jam detection	23	Aging mode + No warm-up cycle + No fusing detection + No jam detection	8	No DV detection	24	Aging mode + No DV detection	9	No DV detection + No jam detection	25	Aging mode + No DV detection + No jam detection	10	No DV detection + No fusing control	26	Aging mode + No DV detection + No fusing control	11	No DV detection + No fusing control + No jam detection	27	Aging mode + No DV detection + No fusing control + No jam detection	12	No DV detection + No warm-up cycle	28	Aging mode + No DV detection + No warm-up cycle	13	No DV detection + No warm-up cycle + No jam detection	29	Aging mode + No DV detection + No warm-up cycle + No jam detection	14	No DV detection + No warm-up cycle + No fusing control	30	Aging mode + No DV detection + No warm-up cycle + No fusing control	15	No DV detection + No warm-up cycle + No fusing control + No jam detection	31	Aging mode + No DV detection + No warm-up cycle + No fusing control + No jam detection		
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Menu	Content		Initial value	Set range
TEST PRINT XX	Printing Test			
	Used to perform self-printing under the set conditions, and to adjust and check the engine set value.			
	Selection Menu:			
	LCD display	Content	Set value	
	MULTI SETTING	Continuous print quantity setup	001 - 999	
	PRINT PATTERN	Test print pattern	1 - 99 (94 - 97 for production only)	
			1	Off center pattern
			40	White copy
			64	All white copy
			70	Scale pattern
			71	Grid pattern
			75	ID: BG pattern
			87	Test image pattern
	CASSETTE	Cassette selection	BPT: No. 1 tray TRAY1: No. 1 tray (STD) TRAY2: No. 2 tray	DESK1: No. 3 tray DESK2: No. 4 tray LCC: LCC tray
	DUPLEX	Duplex setup	NO/USE	
	OUTPUT	Paper exit, finishing method setup	STD: Standard paper exit tray JSP: FIN1: Finisher Top FIN2: Finisher Second STAPLE (F): Staple front STAPLE (R): Staple rear STAPLE (2POS): Staple 2 positions	SADLE: Saddle OFFSET: Offset PUNCH: Punch MAIL_TEST BIN1: No. 1 ~ bin-BIN8: No.8 bin
	LEAD EDGE	Lead edge	1 - 99 (mm)	
	LEAD EDGE VOID	Lead edge void setup	1 - 99 (mm)	
	TAIL EDGE VOID	Rear edge void setup	1 - 99 (mm)	
	SIDE EDGE VOID	Side edge void setup	1 - 99 (mm)	
	T1 PAPER BUCKLE	Tray 1 resist quantity setup	1 - 99	
	T2 PAPER BUCKLE	Tray 2 resist quantity setup	1 - 99	
	T3 PAPER BUCKLE	Tray 3 resist quantity setup	1 - 99	
	T4 PAPER BUCKLE	Tray 4 resist quantity setup	1 - 99	
	MFT PAPER BUCKLE	Manual feed resist quantity adjustment	1 - 99	
	ADU PAPER BUCKLE	Auto duplex resist quantity setup	1 - 99	
	MFT OFF CENTER ADJ	Manual feed tray off-center adjustment	0 - 99	
	T1 OFF CENTER ADJ	Tray 1 of-center adjustment	0 - 99	
	T2 OFF CENTER ADJ	A3 universal tray off-center adjustment	0 - 99	
	T3 OFF CENTER ADJ	Desk 1 tray/LCC1 off-center adjustment	0 - 99	
	T4 OFF CENTER ADJ	Desk 2 tray/LCC2 off-center adjustment	0 - 99	
	ADU OFF CENTER ADJ	Duplex off-center adjustment value setup	0 - 99	

Menu	Content	Initial value	Set range																																																																				
WARM UP TIME DISPLAY	<p>Warm up time display mode. Used to display the warm-up time. (LCD display)</p> <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 10px auto; width: fit-content;">WARM UP TIME DISPLAY</div> <p>*Pressing [OK] key enter the Warm up time display mode. *Pressing [BACK/C] key terminates the Warm up time display mode.</p>																																																																						
COUNTER DATA DISPLAY	<p>Counter data display. Used to display each counter value. (LCD display)</p> <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 10px auto; width: fit-content;">COUNTER DISPLAY</div> <p>*Pressing the [△] or [▽] key selects the counter group for the counter display mode. *Pressing [OK] key displays the counter value. *Using [MENU] moves to the next item. *Pressing [BACK/C] key terminates the Counter Display Mode.</p> <p>COUNTER DISP XXXX::</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">COUNTER DISP.</th><th colspan="2">PROCESS COUNTER DISP.</th></tr> </thead> <tbody> <tr> <td>TOTAL</td><td>Total print quantity</td><td>DRUM</td><td>Drum counter</td></tr> <tr> <td>DRUM</td><td>Drum counter</td><td>TONER</td><td>Toner counter</td></tr> <tr> <td>TONER</td><td>Toner counter</td><td>DEVE</td><td>Developing counter</td></tr> <tr> <td>DEVE</td><td>Developing counter</td><td>MAINTE</td><td>Maintenance counter</td></tr> <tr> <td>MAINTE</td><td>Maintenance counter</td><td>DRUM MOTOR TIME</td><td>Drum motor drive time</td></tr> <tr> <td>TOTAL OUTPUT</td><td>Copy counter (Effective paper counter)</td><td>DV MOTOR TIME</td><td>Developing motor drive time</td></tr> <tr> <td colspan="2">STAPLE COUTNER DISP.</td><td>PROCESS WAY</td><td>Process system</td></tr> <tr> <td>STAPLE</td><td>Staple counter</td><td>DESTINATION</td><td>Destination</td></tr> <tr> <td>PUNCH</td><td>Punch counter</td><td></td><td></td></tr> <tr> <td colspan="2">FEED COUNTER DISP.</td><td></td><td></td></tr> <tr> <td>TRAY1</td><td>Paper feed tray 1 counter</td><td></td><td></td></tr> <tr> <td>TRAY2</td><td>Paper feed tray 2 counter</td><td></td><td></td></tr> <tr> <td>LCC1/TRAY3</td><td>Paper feed tray 3 counter</td><td></td><td></td></tr> <tr> <td>LCC2/TRAY4</td><td>LCC2 or paper feed tray 4 counter</td><td></td><td></td></tr> <tr> <td>MFT</td><td>Manual paper feed counter</td><td></td><td></td></tr> <tr> <td>ADJ</td><td>Duplex counter</td><td></td><td></td></tr> </tbody> </table>	COUNTER DISP.		PROCESS COUNTER DISP.		TOTAL	Total print quantity	DRUM	Drum counter	DRUM	Drum counter	TONER	Toner counter	TONER	Toner counter	DEVE	Developing counter	DEVE	Developing counter	MAINTE	Maintenance counter	MAINTE	Maintenance counter	DRUM MOTOR TIME	Drum motor drive time	TOTAL OUTPUT	Copy counter (Effective paper counter)	DV MOTOR TIME	Developing motor drive time	STAPLE COUTNER DISP.		PROCESS WAY	Process system	STAPLE	Staple counter	DESTINATION	Destination	PUNCH	Punch counter			FEED COUNTER DISP.				TRAY1	Paper feed tray 1 counter			TRAY2	Paper feed tray 2 counter			LCC1/TRAY3	Paper feed tray 3 counter			LCC2/TRAY4	LCC2 or paper feed tray 4 counter			MFT	Manual paper feed counter			ADJ	Duplex counter				
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COUNTER DATA CLEAR	<p>Counter data clear. Used to clear each counter value. (LCD display)</p> <div>XXXXXX COUNTER CLEAR</div> <p>*Pressing the [△] or [▽] key selects the counter group for the counter clear mode. *Pressing [OK] key displays the counter clear group. *Using [MENU] moves to the next mode *Pressing the [△] or [▽] keys changes the YES or NO. *Pressing [OK] key starts the counter data clear mode. *Pressing [BACK/C] key terminates the counter data clear mode.</p> <p>COUNTER CLEAR:</p> <table><tr><td colspan="2">FEED COUNTER CLEAR</td><td colspan="2">DEVE COUNTER CLEAR</td></tr><tr><td>TRAY1</td><td>Paper feed tray 1 counter</td><td>DEVE</td><td>Developing counter</td></tr><tr><td>TRAY2</td><td>Paper feed tray 2 counter</td><td colspan="2">DRUM COUNTER CLEAR</td></tr><tr><td>LCC1/TRAY3</td><td>Paper feed tray 3 counter</td><td>DRUM</td><td>Drum counter</td></tr><tr><td>LCC1/TRAY4</td><td>LCC1 or paper ray tray 4 counter</td><td colspan="2">TONER COUNTER CLEAR</td></tr><tr><td>MFT</td><td>Manual paper feed counter</td><td>TONER</td><td>Toner counter</td></tr><tr><td>ADU</td><td>Duplex counter</td><td colspan="2">OUTPUT COUNTER CLEAR</td></tr><tr><td colspan="2">STAPLE COUNTER CLEAR</td><td>TOTAL OUTPUT</td><td>Copy counter (Effective paper counter)</td></tr><tr><td>STAPLE</td><td>Staple counter</td><td colspan="2">TIMER DATA CLEAR</td></tr><tr><td>PUNCH</td><td>Punch counter</td><td>DRUM ROTATION</td><td>Drum motor RPM</td></tr><tr><td colspan="2">MNT COUNTER CLEAR</td><td>DEVE ROTATION</td><td>Developing motor RPM</td></tr><tr><td>MENTENANCE</td><td>Maintenance counter</td><td></td><td></td></tr></table>	FEED COUNTER CLEAR		DEVE COUNTER CLEAR		TRAY1	Paper feed tray 1 counter	DEVE	Developing counter	TRAY2	Paper feed tray 2 counter	DRUM COUNTER CLEAR		LCC1/TRAY3	Paper feed tray 3 counter	DRUM	Drum counter	LCC1/TRAY4	LCC1 or paper ray tray 4 counter	TONER COUNTER CLEAR		MFT	Manual paper feed counter	TONER	Toner counter	ADU	Duplex counter	OUTPUT COUNTER CLEAR		STAPLE COUNTER CLEAR		TOTAL OUTPUT	Copy counter (Effective paper counter)	STAPLE	Staple counter	TIMER DATA CLEAR		PUNCH	Punch counter	DRUM ROTATION	Drum motor RPM	MNT COUNTER CLEAR		DEVE ROTATION	Developing motor RPM	MENTENANCE	Maintenance counter				
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TROUBLE CANCEL X	<p>Trouble cancel. Used to cancel a trouble code. (LCD display)</p> <div>TROUBLE CANCEL X</div> <p>*Pressing the [△] or [▽] key selects the trouble cancel mode. *Pressing [OK] key start the trouble cancel mode. *Using [△] and [▽] keys changes the YES or NO. *Pressing [OK] key starts the trouble cancel mode. *Pressing [BACK/C] key terminates the trouble cancel mode.</p> <table><tr><td>X:</td><td></td></tr><tr><td>E-TBL</td><td>Cancel troubles except for U2 in the engine mode.</td></tr><tr><td>E-U2</td><td>Cancel U2 trouble in the engine mode.</td></tr><tr><td>C-TBL</td><td>Cancel trouble in the contoroller mode.</td></tr></table>	X:		E-TBL	Cancel troubles except for U2 in the engine mode.	E-U2	Cancel U2 trouble in the engine mode.	C-TBL	Cancel trouble in the contoroller mode.																																										
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XXX SIZE SETUP	<p>Tray size setting. Used to set the paper size on No. 1 paper feed tray and the LCC tray. (LCD display)</p> <div>XXX SIZE SETUP</div> <p>*Pressing the [△] or [▽] key select the tray. *Pressing [OK] key displays the tray size. *Using [△] and [▽] keys changes the tray size. *Pressing [OK] key set the change of the tray size. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>XXX:</td><td></td></tr><tr><td>TRAY1</td><td>TRAY1</td></tr><tr><td>LCC</td><td>LCC</td></tr></table>	XXX:		TRAY1	TRAY1	LCC	LCC		<div>Tray1</div> <table><tr><td>Set value</td></tr><tr><td>A4</td></tr><tr><td>B5</td></tr><tr><td>8.5"x11"</td></tr></table> <div>LCC</div> <table><tr><td>Set value</td></tr><tr><td>A4</td></tr><tr><td>8.5"x11"</td></tr></table>	Set value	A4	B5	8.5"x11"	Set value	A4	8.5"x11"																																			
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DESTINATION SETUP	<p>Destination setup. Used to perform the destination setup. (LCD display)</p> <div>DESTINATION SETUP</div> <p>*Pressing the [△] or [▽] key select the destination. *Pressing [OK] key displays the destination. *Using [△] and [▽] keys changes the destination. *Pressing [OK] key set the change of the destination. *Pressing [BACK/C] key terminates the setting.</p>																		
TRAY DETECT TYPE xx	<p>Tray detect type setting. Used to select between the AB series and the inch series for size detection of each paper feed tray. (LCD display)</p> <div>TRAY DETECT TYPE XXX</div> <p>*Pressing the [△] or [▽] key select the tray. *Pressing [OK] key displays the destination. *Using [△] and [▽] keys changes the destination. *Pressing [OK] key set the change of the destination. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>XX:</td><td></td></tr><tr><td>M:</td><td>MFT</td></tr><tr><td>T2:</td><td>A3 Universal tray</td></tr><tr><td>T3:</td><td>Desk tray1</td></tr><tr><td>T4:</td><td>Desk tray2</td></tr></table>	XX:		M:	MFT	T2:	A3 Universal tray	T3:	Desk tray1	T4:	Desk tray2		<table><tr><td>Set value</td></tr><tr><td>AB</td></tr><tr><td>INCH</td></tr></table>	Set value	AB	INCH			
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CE MARK SETTING	<p>CE mark setting. Used to set the operation mode conforming to the CE mark. (LCD display)</p> <div>CE MARK SETTING</div> <p>*Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the YES or NO. *Pressing [OK] key memorize the CE mark mode. *Pressing [BACK/C] key terminates the setting.</p>		<table><tr><td>Set value</td></tr><tr><td>YES</td></tr><tr><td>NO</td></tr></table>	Set value	YES	NO													
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YES																			
NO																			
COUNTUP MODE SETUP	<p>countup mode setup. 1.Used to set the count-up mode of A3 (11 x 17) paper. 2.Used to set whether to perform count-up of blank paper. (LCD display)</p> <div>COUNTUP MODE SETUP X</div> <p>*Pressing the [△] or [▽] key select the counter mode. *Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the countup number. *Pressing [OK] key memorize the countup number. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>total counter A3(11X17) countup mode.</td></tr><tr><td>B:</td><td>mainte counter A3(11X17) countup mode.</td></tr><tr><td>C:</td><td>deve counter A3(11X17) countup mode.</td></tr><tr><td>D:</td><td>blank paper countup mode.</td></tr></table>	X:		A:	total counter A3(11X17) countup mode.	B:	mainte counter A3(11X17) countup mode.	C:	deve counter A3(11X17) countup mode.	D:	blank paper countup mode.		<p>A ~ C</p> <table><tr><td>Set value</td></tr><tr><td>SINGLE</td></tr><tr><td>DOU- BLE</td></tr></table> <p>D</p> <table><tr><td>Set value</td></tr><tr><td>NO (NO- COUNT UP)</td></tr><tr><td>YES (COU- NT UP)</td></tr></table>	Set value	SINGLE	DOU- BLE	Set value	NO (NO- COUNT UP)	YES (COU- NT UP)
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Menu	Content	Initial value	Set range
MNT CYCLE SETUP	<p>Maintenance cycle setup. Used to set the maintenance cycle. (LCD display)</p> <div>MNT CYCLE SETUP</div> <p>*Pressing [OK] key displays the maintenance cycle. *Using [△] and [▽] keys changes the maintenance cycle. *Pressing [OK] key set the change of the maintenance cycle. *Pressing [BACK/C] key terminates the setting.</p>		<div>Set value</div> <div>DEFAULT</div> <div>40K</div> <div>50K</div> <div>80K</div> <div>100K</div> <div>120K</div> <div>FREE</div>
LIFE OVER SETTING	<p>Life over setting. Used to set whether to stop printing when the developer life is over. (LCD display)</p> <div>LIFE OVER SETTING</div> <p>*Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the YES or NO. *Pressing [OK] key memorize the life over mode. *Pressing [BACK/C] key terminates the setting.</p>		<div>Set value</div> <div>YES</div> <div>NO</div>
FINISHER JOGGER ADJ.	<p>Finisher jogger adjustment. Used to adjust the finisher (AR-FN6/FN7) jogger. For details, refer to each Service Manual of the AR-FN6/FN7. (LCD display)</p> <div>FINISHER JOGGER ADJ.</div> <p>*Press [OK] key to display the finisher jogger adjustment value. *Using [△] or [▽] key changes the value. *Press [MENU] key to display the adjustment value. *Press [△] or [▽] key to change the value. *Pressing [OK] key starts the finisher jogger adjustment. *DATA (LED) blinks during the processing. *Pressing [BACK/C] key terminates the finisher jogger adjustment.</p>		
CONSOLE FIN. SET X	<p>Console finisher setting. Used to perform the adjustments of the console finisher (AR-FN7). For details, refer to the Service Manual of the AR-FN7. (LCD display)</p> <div>CONSOLE FIN. SET X</div> <p>*Pressing the [△] or [▽] key select the console finisher mode. *Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the value. *Pressing [OK] key memorize the value. *Pressing [BACK/C] key terminates the setting.</p>		

Menu	Content	Initial value	Set range																						
CONSOLE FIN. SET X	<p>Console finisher setting. Used to perform the adjustments of the console finisher (AR-FN7). For details, refer to the Service Manual of the AR-FN7.</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>saddle binding position</td></tr><tr><td>B:</td><td>saddle fold position</td></tr><tr><td>C:</td><td>console finisher adjustment (front)</td></tr><tr><td>D:</td><td>console finisher adjustment (rear)</td></tr><tr><td>E:</td><td>staple position (rear)</td></tr><tr><td>F:</td><td>staple position (front)</td></tr><tr><td>G:</td><td>center adjustment (staple)</td></tr><tr><td>H:</td><td>staple pitch</td></tr><tr><td>I:</td><td>center adjustment (punch)</td></tr><tr><td>J:</td><td>punch position</td></tr></table>	X:		A:	saddle binding position	B:	saddle fold position	C:	console finisher adjustment (front)	D:	console finisher adjustment (rear)	E:	staple position (rear)	F:	staple position (front)	G:	center adjustment (staple)	H:	staple pitch	I:	center adjustment (punch)	J:	punch position		
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H:	staple pitch																								
I:	center adjustment (punch)																								
J:	punch position																								
TROUBLE MEM. MODE SET	<p>Trouble memory mode setting. Used to set the storing method of data into memory in case of a trouble. (LCD display)</p> <div>MEMORY MODE SETTING</div> <p>*Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the value. *Pressing [OK] key memorize thevalue. *Pressing [BACK/C] key terminates the setting.</p> <table><tr><td>Set value</td><td>Operation</td></tr><tr><td>ONCE</td><td>The same trouble as the previous one is not stored.</td></tr><tr><td>ANY</td><td>Any trouble is stored unconditionally.</td></tr></table>	Set value	Operation	ONCE	The same trouble as the previous one is not stored.	ANY	Any trouble is stored unconditionally.		<table><tr><td>Set value</td></tr><tr><td>ONCE</td></tr><tr><td>ANY</td></tr></table>	Set value	ONCE	ANY													
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Set value																									
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ANY																									
LAST JAM CODE DISP	<p>Last jam code display. Used to display the jam history. (LCD display)</p> <div>LAST JAM CODE DISP</div> <p>*Pressing [OK] key enter the last jam code display mode. *Pressing [BACK/C] key terminates the last jam code display mode.</p>																								
SYSTEM INFORMATION X	<p>System information dispaly. Use to display the machine information. (LCD display)</p> <div>SYSTEM INFORMATION X</div> <p>*Pressing the [△] or [▽] key selects the group. *Pressing [OK] key displays the system information. *Using [MENU] moves to the next item. *Pressing [BACK/C] key terminates the system information</p> <p>Mode group is:</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>ROM version</td></tr><tr><td>B:</td><td>machine speed</td></tr><tr><td>C:</td><td>process type</td></tr></table>	X:		A:	ROM version	B:	machine speed	C:	process type																
X:																									
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Menu	Content	Initial value	Set range						
PROCESS DATA DISPLAY	<p>Process control data display. (LCD display)</p> <div><div>DRUM ADJ. (VG)</div><div>30</div></div> <p>*Pressing the [△] or [▽] key selects the group. *Pressing [OK] key displays the process control data. *Using [MENU] moves to the next item *Pressing [BACK/C] key terminates the process control data display mode.</p> <p>group is:</p> <table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>process control data</td></tr><tr><td>B:</td><td>toner control data</td></tr></table>	X:		A:	process control data	B:	toner control data		
X:									
A:	process control data								
B:	toner control data								
XXX CHECK.	<p>Controller port check. (LCD display)</p> <div><div>CENTRO PORT CHECK</div><div>OK</div></div> <p>*Pressing the [△] or [▽] key selects the port check mode. *Pressing [OK] key start the port check. *Pressing [BACK/C] key terminates the the port check mode.</p> <table><tr><td>XXX:</td><td></td></tr><tr><td></td><td>CENTRO PORT CHECK</td></tr><tr><td></td><td>NIC CHECK (network interface card check)</td></tr></table>	XXX:			CENTRO PORT CHECK		NIC CHECK (network interface card check)		
XXX:									
	CENTRO PORT CHECK								
	NIC CHECK (network interface card check)								
SELECT IN SIGNAL SET	<p>Select in signal setting. (LCD display)</p> <div><div>SELECT IN SIGNAL SET</div><div>ON</div></div> <p>*Pressing [OK] key start the select in signal setting mode. *Using the [△] and [▽] keys changes the ON or OFF. *Pressing [OK] key starts the select in signal setting. *Pressing [BACK/C] key terminates the select in signal setting mode.</p>								

[11] TROUBLE CODES

1. Trouble codes list

Trouble codes		Contents	Remark	Trouble detection
C1	00	MC trouble		PCU
E7	02	Laser trouble		PCU
	03	HDD trouble	With HDD installed	Controller
	06	Decode error trouble		Controller
	50	LSU connection trouble		PCU
F1	00	Finisher communication trouble	With Finisher installed	PCU
	08	Finisher staple shift motor trouble	With Finisher installed	PCU
	80	Finisher 24V power supply trouble	With Finisher installed	PCU
	87	Finisher staple rotation motor trouble	With Finisher installed	
F1	00	Mail bin stacker communication trouble	With Mail bin stacker installed	PCU
	02	mail bin stacker main drive motor trouble	With Mail bin stacker installed	PCU
	12	Mail bin stacker gate trouble	With Mail bin stacker installed	PCU
	80	Mail bin stacker 24V power supply trouble	With Mail bin stacker installed	PCU
F1	03	Console finisher paddle motor trouble	With Console Finisher installed	PCU
	06	Console finisher slide motor trouble	With Console Finisher installed	PCU
	10	Console finisher stapler motor trouble	With Console Finisher installed	PCU
	11	Console finisher bundle exit motor trouble	With Console Finisher installed	PCU
	15	Console finisher lift motor trouble	With Console Finisher installed	PCU
	19	Console finisher alignment motor trouble FRONT	With Console Finisher installed	PCU
	20	Console finisher alignment motor trouble	With Console Finisher installed	PCU
	30	Console finisher communication trouble	With Console Finisher installed	PCU
	31	Console finisher fold sensor trouble	With Console Finisher installed	PCU
	32	Console finisher punch unit communication trouble	With Console Finisher installed	PCU
	33	Console finisher punch side register motor trouble	With Console Finisher installed	PCU
	34	Console finisher punch motor trouble	With Console Finisher installed	PCU
	35	Console finisher punch side register sensor trouble	With Console Finisher installed	PCU

Trouble codes		Contents	Remark	Trouble detection
F1	36	Console finisher punch timing sensor trouble	With Console Finisher installed	PCU
	37	Console finisher backup RAM trouble	With Console Finisher installed	PCU
	38	Console finisher punch backup RAM trouble	With Console Finisher installed	PCU
	81	Console finisher transport motor trouble	With Console Finisher installed	PCU
F2	00	Toner concentration sensor open		PCU
	02	Toner supply abnormality		PCU
	04	Improper cartridge (Destination error, life cycle error)		PCU
	05	CRUM error		PCU
	39	Process thermistor breakdown		PCU
F3	12	Tray 1 lift-p trouble		PCU
	22	Tray 2 lift-up trouble (Multi-purpose tray)	Multi-purpose tray	PCU
H2	00	Thermistor open (HL1)		PCU
	01	Thermistor open (HL2)		PCU
H3	00	Heat roller high temperature detection (HL1)		PCU
	01	Heat roller high temperature detection (HL2)		PCU
H4	00	Heat roller low temperature detection (HL1)		PCU
	01	Heat roller low temperature detection (HL2)		PCU
H5	01	5-time continuous POD1 not-reaching JAM detection		PCU
L4	01	main motor lock detection		PCU
	02	Drum motor lock detection		PCU
L6	10	Polygon motor lock detection		PCU
L8	01	No full-wave signal		PCU
	02	Full-wave signal width abnormality		PCU
U6	00	Desk/LCC communication trouble	With Paper feed desk installed	PCU
	01	Desk/LCC1 CS lift-up trouble (Multi-purpose tray)	With Paper feed desk installed	PCU
	02	Desk2 CS lift-up trouble/LCC1 lift-up trouble	With Paper feed desk installed	PCU
	03	Desk3 CS lift-up trouble/LCC2 lift-up trouble	With Paper feed desk installed	PCU
	10	Desk/LCC transport motor trouble	With Paper feed desk installed	PCU
EE	EL	Auto developer adjustment trouble (Over-toner)	Only during DIAG	PCU
	EU	Auto developer adjustment trouble (Under-toner)	Only during DIAG	PCU
F9	02	Centro port check error		Controller
	03	NIC port check error		Controller
U1	01	Battery abnormality	With FAX board installed	Controller
U2	00	EEPROM read/write error (Controller)		Controller
	11	Counter check sum error (Controller EEPROM)		Controller

Trouble codes		Contents	Remark	Trouble detection
U2	12	Adjustment value check sum error (Controller EEPROM)		Controller
	90	PCU section EEPROM read/write error		PCU
	91	PCU section memory sum check error		PCU
U7	00	PC/MODEM communication error		Controller
PF	--	RIC copy inhibit command reception		Controller
CH	--	Door open (CH ON)		PCU
	00	No developer cartridge		PCU
	01	No toner cartridge		PCU
--	--	Auditor not ready		Controller
PC	--	Personal counter not installed		Controller

2.Details of trouble codes

MAIN	SUB		
C1	00	Content	MC trouble
		Detail	Main charger output abnormality (Output open) Trouble signal is outputted from the high voltage transformer.
		Cause	The main charger is not installed properly. The main charger is not assembled properly. Disconnection of connector of high voltage transformer. High voltage harness disconnection or breakage.
		Check and remedy	Use the diag mode or DIAG to check the main charger output. Check for disconnection of the main charger. Replace the high voltage unit.
E7	02	Content	Laser trouble
		Detail	BD signal from LSU is kept OFF, or ON.
		Cause	The connector of LSU or the harness in LSU is disconnected or broken. The polygon motor does not rotate normally. The laser home position sensor in LSU is shifted. The proper voltage is not supplied to the power line for laser. Laser emitting diode trouble PCU PWB trouble Controller PWB trouble
		Check and remedy	Check for disconnection of the LSU connector. Use DIAG (SIM 61-1) to check LSU operation. Check that the polygon motor rotates normally or not. Check light emission of laser emitting diode. Replace the LSU unit. Replace the PCU PWB. Replace the Controller PWB.

MAIN	SUB		
E7	03	Content	HDD trouble
		Detail	HDD does not operate properly in the machine with HDD installed.
		Cause	HDD is not installed properly to the Controller PWB. HDD does not operate properly in the Controller PWB. Controller PWB trouble
		Check and remedy	Check installation of HDD to the Controller PWB. Check connection of the harness of HDD to the Controller PWB. Use DIAG (SIM 62-2, -3) to check read/write of HDD. Replace HDD. Replace Controller PWB.
	06	Content	Decode error trouble
		Detail	A decode error occurs during making of an image.
		Cause	Data error during input from PCI to PM. PM trouble Data error during image compression/transfer. Controller PWB abnormality
		Check and remedy	Check insertion of the PWB. (PCI bus) If the error occurred in a FAX job, check installation of the FAX PWB. For the other cases, check the Controller PWB. Replace the Controller PWB.
	50	Content	LSU connection trouble
		Detail	An LSU which does not conform to the machine is installed.
		Cause	PCU PWB trouble LSU trouble
F1	00	Content	Finisher communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the finisher
		Cause	Improper connection or disconnection of connectors and harness between the machine and the finisher. Finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the finisher control PWB or PCU PWB.
	08	Content	Finisher staple shift motor trouble
		Detail	Staple motor drive trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check operations of the staple motor.

MAIN	SUB		
F1	80	Content	Finisher power abnormality
		Detail	The 24V power is not supplied to the finisher PWB.
		Cause	Improper connection or disconnection of connector and harness Finisher control PWB trouble Power unit trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor.
	87	Content	Finisher staple rotation motor trouble
		Detail	Front staple rotation motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
F1	00	Content	Mail box communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the mail box.
		Cause	Improper connection or disconnection of connector and harness between the machine and the mail box. Mail box control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check harness and connector in the communication line. Replace the mail box PWB or PCU PWB.
	02	Content	Mail box transport motor abnormality
		Detail	Transport motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Mail box control PWB trouble
		Check and remedy	Use DIAG (SIM3-21) to check the transport motor operation.
	12	Content	Mail box gate trouble
		Detail	Gate operation abnormality
		Cause	Gate lock Mail box control PWB trouble
		Check and remedy	Use DIAG (SIM3-21) to check the transport gate operation.
	80	Content	Finisher power abnormality
		Detail	The 24V power is not supplied to the finisher PWB.
		Cause	Improper connection or disconnection of connector and harness Finisher control PWB trouble Power unit trouble
		Check and remedy	Use DIAG (SIM3-20) to check the sensor operation.

MAIN	SUB		
F1	03	Content	Console finisher paddle motor trouble
		Detail	Paddle motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	06	Content	Console finisher slide motor trouble
		Detail	Slide motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	10	Content	Console finisher stapler motor trouble
		Detail	Stapler motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	11	Content	Console finisher bundle exit motor trouble
		Detail	Bundle exit motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	15	Content	Console finisher lift motor trouble
		Detail	Lift motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	19	Content	Console finisher front alignment motor trouble
		Detail	Front alignment motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	20	Content	Console finisher rear alignment motor trouble
		Detail	Rear alignment motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.

MAIN	SUB		
F1	30	Content	Console finisher communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the console finisher
		Cause	Improper connection or disconnection of connector and harness between the machine and the console finisher. Console finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the console finisher control PWB or PCU PWB.
	31	Content	Console finisher fold sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage harness breakage Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.
	32	Content	Communication trouble between the console finisher and the punch unit.
		Detail	Communication err between the console finisher and the punch unit.
		Cause	Improper connection or disconnection of connector and harness between the console finisher and the punch unit. Console finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the console finisher control PWB.
	33	Content	Console finisher punch side registration motor trouble
		Detail	Punch side registration motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	34	Content	Console finisher punch motor trouble
		Detail	Punch motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	35	Content	Console finisher punch side registration sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage Harness disconnection Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.

MAIN	SUB		
F1	36	Content	Console finisher punch timing sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage Harness disconnection Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.
	37	Content	Console finisher backup RAM trouble
		Detail	Backup RAM contents are disturbed.
		Cause	Console finisher control PWB trouble Malfunction by noise
		Check and remedy	Replace the console finisher control PWB.
	38	Content	Console finisher punch backup RAM trouble
		Detail	Punch unit backup RAM contents are disturbed.
		Cause	Punch control PWB trouble Malfunction by noise
		Check and remedy	Replace the punch control PWB.
	81	Content	Console finisher transport motor abnormality
		Detail	Transport motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
F2	00	Content	Toner control sensor abnormality
		Detail	Toner control sensor output open
		Cause	Connector harness trouble Connector disconnection
		Check and remedy	Check connection of the toner control sensor. Check connection of connector and harness to the main PWB. Check for disconnection of harness.
	02	Content	Toner supply abnormality
		Detail	Toner control sensor output value becomes under-toner too earlier.
		Cause	Connector harness trouble Toner control sensor trouble
		Check and remedy	Check connection of the connector in the toner motor section. Check connection of connector and harness to the main PWB. Check for disconnection of harness. Toner control sensor output check DIAG (SIM25-1)
	04	Content	Improper cartridge (life cycle error, etc.)
		Detail	An improper process cartridge is inserted.
		Cause	IC chip trouble Improper cartridge
		Check and remedy	Insert a proper cartridge.
	05	Content	CRUM error
		Detail	Communication with IC chip cannot be made.
		Cause	IC chip trouble Improper cartridge
		Check and remedy	Insert a proper cartridge.

MAIN	SUB		
F2	39	Content	Process thermistor trouble
		Detail	Process thermistor open
		Cause	Process thermistor trouble Process thermistor harness disconnection PCU PWB trouble
		Check and remedy	Check connection of harness and connector of the process thermistor. Check PCU PWB.
F3	12	Content	Machine no. 1 tray lift-up trouble
		Detail	PED does not turn ON in the specified time. LUD does not turn ON in the specified time.
		Cause	PED/LUD trouble No. 1 tray lift-up trouble Check connection of harness between the PCU PWB, lift-up unit, and paper feed unit.
		Check and remedy	Check PED, LUD, and their harness and connectors. Check the lift-up unit.
	22	Content	Machine No. 2 tray lift-up trouble
		Detail	MCPED does not turn ON in the specified time. MCLUD does not turn ON in the specified time.
		Cause	MCPED/MCLUD trouble No. 2 tray lift-up motor trouble Harness disconnection f the PCU PWB, the lift-up unit, and the paper feed unit.
		Check and remedy	Check MCPED, PCLUD, and their harness and connectors. Check the lift-up unit.
H2	00... HL1 (RT H1)	Content	thermistor open Fusing unit not installed
		Detail	Thermistor is open. (An input voltage of 2.92V or above is detected.) Fusing unit not installed
	01... HL2 (RT H2)	Cause	Thermistor trouble Control PWB trouble Fusing section connector disconnection AC power trouble Fusing unit not installed
		Check and remedy	Check harnesses and connectors from the thermistor to the control PWB. Use DIAG (SIM14) to clear the self diag display.
H3	00... 1HL1 (RT H1)	Content	Fusing section high temperature trouble
		Detail	The fusing temperature exceeds 242°C. (An input voltage of 0.27V or above is detected.)
	01... HL2 (RT H2)	Cause	thermistor trouble Control PWB trouble Fusing section connector disconnection AC power trouble
		Check and remedy	Use DIAG (SIM5-2) to check the heater lamp Blinking operation. If the heater lamp blinks normally: Check the thermistor and its harness. Check the thermistor input circuit in the control PWB. If the heater lamp keep lighting: Check the AC PWB and the lamp control circuit in the control PWB. Use DIAG (SIM14) to cancel the trouble

MAIN	SUB		
H4	00... 1HL1 (RT H1)	Content	Fusing section low temperature trouble
		Detail	•The set temperature is not reached within the specified time (normally 3 min) when warming up or resetting from pre-heating. •Under the ready state. (An input voltage of 1.21V or below is detected 5 times continuously.)
	01... HL2 (RT H2)	Cause	thermistor trouble Heater lamp trouble Control PWB trouble Thermostat trouble AC power trouble Interlock switch trouble
		Check and remedy	Use DIAG (SIM5-2) to check the heater lamp Blinking operation. If the heater lamp blinks normally: Check the thermistor and its harness. Check the thermistor input circuit in the control PWB. If the heater lamp does not light: Check for heater lamp disconnection and thermostat disconnection. Check the interlock switch. Check the AC PWB and the lamp control circuit in the control PWB. Use DIAG (SIM14) to cancel the trouble.
H5	01	Content	5-time continuous POD1 not-reaching jam detection
		Detail	5-time continuous POD1 not-reaching jam detection
		Cause	A fusing section jam is not properly removed. (Jam paper remains.) POD1 sensor trouble, or harness disconnection Improper installation of fusing unit
		Check and remedy	Check jam paper in the fusing section. (winding, etc.) Check POD1 sensor harness, and check installation the fusing unit. Use DIAG (SIM14) to cancel the trouble.
L4	01	Content	Main motor lock detection
		Detail	The motor lock signal is detected for 1.5sec during rotation of the main motor.
		Cause	main motor trouble Check connection of harness between the PCU PWB and the main motor. Control circuit trouble
	02	Check and remedy	Use DIAG (SIM25-1) to check the main motor operation. Check harness and connector between the PCU PWB and the main motor.
		Content	Drum motor lock detection
		Detail	The motor lock signal is detected for 1.5sec during rotation of the drum motor.
		Cause	Drum motor trouble Improper connection of harness between the PCU PWB and the drum motor. Control circuit trouble
		Check and remedy	Use DIAG (SIM25-1) to check the drum motor operation. Check harness and connector between the PCU PWB and the drum motor.

MAIN	SUB		
L6	10	Content	Polygon motor lock detection
		Detail	It is judged that the polygon motor lock signal is not outputted. Lock signal is checked in the interval of 10sec after starting the polygon motor, and it is judged that the polygon motor does not rotate normally.
		Cause	The LSU connector or harness in the LSU is disconnected or broken. Polygon motor trouble
		Check and remedy	Use DIAG (SIM61-1) to check the polygon motor operation. Check connector and harness connection. Replace LSU.
L8	01	Content	No fullwave signal
		Detail	Full wave signal is not detected.
		Cause	The PCU PWB connector or the power unit harness is disconnected or broken. PCU PWB trouble Power unit trouble
		Check and remedy	Check connection of the harness and connector. Replace PCU PWB. Replace the power unit.
	02	Content	Full wave signal width abnormality
		Detail	It is judged as frequency abnormality of full wave signal. (When the detection cycle is judged as 69Hz or above or 42.5Hz or below)
		Cause	The connector or harness of the PCU PWB and the power PWB is disconnected. PCU PWB trouble Power unit trouble
		Check and remedy	Check connection of the harness and connector. Replace the PCU PWB. Replace the power unit.
U6	00	Content	Desk/LCC communication trouble
		Detail	Desk/LCC communication error Communication cable test error after turning on the power or exiting DIAG.
		Cause	Improper connection or disconnection of connector and harness Desk control PWB trouble Control PWB (PCU) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connection of the harness and connector in the communication line.
	01	Content	Desk/LCC No. 1 tray lift-up trouble
		Detail	Desk/LCC No. 1 tray lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.

MAIN	SUB		
U6	02	Content	Desk No. 2 tray/LCC1 lift-up trouble
		Detail	Desk No. 2 tray/LCC lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.
	03	Content	Desk No. 3 tray/LCC2 lift-up trouble
		Detail	Desk no. 3 tray lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.
	10	Content	Desk/LCC transport motor trouble
		Detail	Desk/LCC transport motor operation trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Desk control PWB trouble
		Check and remedy	Use DIAG (SIM4-3) to check the transport motor operation.
EE	EL	Content	Auto developer adjustment trouble (Over-toner)
		Detail	The sample data is of 68 or below when auto developer adjustment is performed.
		Cause	Toner concentration sensor trouble Charging voltage, developing voltage abnormality Insufficient toner concentration Developing unit trouble PCU PWB trouble
		Check and remedy	Use DIAG (SIM25-2) to perform auto developer adjustment.
	EU	Content	Auto developer adjustment trouble (Under-toner)
		Detail	The sample data is of 168 or above when auto developer adjustment is performed.
		Cause	Insufficient toner concentration Charging voltage, developing voltage abnormality Insufficient toner concentration Developing unit trouble PCU PWB trouble
		Check and remedy	Use DIAG (SIM25-2) to perform auto developer adjustment.
F9	02	Content	PRT Centro port check error
		Detail	Controller Centro port trouble
		Cause	Centro port trouble Controller PWB trouble
		Check and remedy	Replace the Controller PWB.
	03	Content	NIC port check error
		Detail	NIC port check error
		Cause	NIC port trouble NIC PWB trouble Controller PWB trouble
		Check and remedy	Replace the NIC PWB. Replace the Controller PWB.

MAIN	SUB		
U1	01	Content	Battery abnormality
		Detail	Backup SRAM battery voltage fall
		Cause	Battery life Battery circuit abnormality
		Check and remedy	Check that the battery voltage is about 2.5V or above. Check the battery circuit.
U2	00	Content	EEPROM read/write error (Controller)
		Detail	EEPROM write error
		Cause	EEPROM trouble EEPROM is not initialized. Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	11	Content	Counter check sum error (Controller)
		Detail	Counter data area check sum error
		Cause	EEPROM trouble Control circuit trouble by noise Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	12	Content	Adjustment value check sum error (Controller)
		Detail	Adjustment data area check sum error
		Cause	EEPROM trouble Control circuit trouble by noise Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	90	Content	EEPROM read/write error (Controller)
		Detail	PCU EEPROM write error
		Cause	EEPROM trouble EEPROM is not initialized. PCU PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	91	Content	Memory check sum error (PCU)
		Detail	PCU memory check sum error
		Cause	EEPROM trouble EEPROM is not initialized. PCU PWB EEPROM access circuit trouble Uninitialized E2PROM installed.
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.

MAIN	SUB		
U7	00	Content	RIC communication trouble
		Detail	RIC communication trouble Communication cable test error after turning on the power or exiting DIAG.
		Cause	Disconnection of connector and harness RTC control PWB trouble Control PWB (Controller) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connector and harness in the communication line.
PF	00	Content	RIC copy inhibit signal is received.
		Detail	Copy inhibit command from RIM (host) is received.
		Cause	Judged by the host.
		Check and remedy	Inform to the host.

3.Halt of operation in trouble

A. Troubles where the machine can be operated depending on the conditions (Include Multi Function)

Trouble	Judgment block	Trouble code	Operation-possible mode					
			Copy read (interruption, etc.)	FAX send	Email send	FAX print	Print	List print
(SPF trouble)	SCANNER	U5	△ 1	△ 1	△ 1	O	O	O
Scanner section troubles (Mirror motor, lens, copy lamp)	SCANNER	L1,L3,U2 (80,81)	X	X	X	O	O	O
(AE trouble)	-	L9	△ 2	△ 2	△ 2	O	O	O
(ADU trouble)	PCU	U4	△ 3	O	O	△ 3	△ 3	△ 3
FAX board trouble	Controller/ FAX	F6,F7	O	X	O	X	O	O
FAX power OFF	Controller		O	X	O	X	O	O
Staple trouble	PCU	F1(10)	△ 4	O	O	△ 4	△ 4	△ 4
Paper feed tray trouble	PCU	F3, U6 (Desk)	△ 5	O	O	△ 5	△ 5	△ 5
(Process control trouble)	PCU		△ 6	O	O	△ 6	△ 6	△ 6
PCU section troubles (Motor, fusing, etc.)	PCU		X	O	O	X	X	X
After-work trouble	PCU		△ 9	O	O	△ 9	△ 9	△ 9
Laser trouble	PCU	E7 (02 only), L6	X	O	O	X	X	X
HDD trouble	Controller	E7 (03)	X	X	X	X	X	X
CCD troubles (Shading, etc.)	SCANNER	E7 (10, 11, 13)	X	X	X	O	O	O
Scanner communication trouble	Controller	E7 (80)	X	X	X	O	O	O
PCU communication trouble	Controller	E7 (90)	X	O	O	X	X	X
Printer port trouble	Controller	F9	O	O	△ 11	O	△ 11	O
Backup battery voltage fall	Controller	U1 (01)	O	X	X	O	O	O
Memory trouble (Expansion RAM not installed, etc.)	Controller	U2 (00, 11, 12)	X	X	X	X	X	X
External communication invalid (RIC)	Controller	U7, PF	X	X	X	X	X	X
Image memory trouble, decode error	Controller	E7(01, 06)	X	X	X	X	X	X

O : Operation possible X : Operation impossible △ : Operation possible depending on conditions

- △ 1 :Operation possible in the OC mode
- △ 2 :Operation possible in the manual mode
- △ 3 :Single mode only
- △ 4 :Operation possible except for the staple mode
- △ 5 :Operation possible except for the trouble tray
- △ 6 :Operation possible if the image can be limited
- △ 8 :Original/list print possible after reception
- △ 9 :Operation possible except for the trouble paper exit section
- △ 10 :Operation possible by use of memory only
- △ 11 :Operation possible if the used port (NIC, Centro) is normal

B. Trouble mode process

Machine operation possible depending on conditions	Operations except for the trouble mode are possible (READY). For the mode where operations are impossible, only setup can be allowed, and the message is provided to show that operations are impossible. (NOT READY in this case.) (Display) A dialog is shown in case of a trouble. For the mode where operations are possible, the OK button is added to the message. For the mode where operations are impossible, the OK button is not shown, and the process to cancel is indicated.
Machine operation is impossible	The trouble display is always shown, and all setup operations are invalid.

C. Writing to the trouble memory

In this series, the simulation (diag) allows to select whether the same trouble is written to the trouble memory when it occurs. If the DIAG simulation is set as above, when any trouble occurs, its hysteresis is written to the trouble memory. DIAG(SIM 26-35)

- 0: The same trouble as the previous one is not recorded. (Default)
- 1: When a trouble occurs, it is written to the trouble memory without exception.

CAUTION FOR BATTERY REPLACEMENT

(Danish)

ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English)

Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish)

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French)

ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish)

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German)

Achtung

Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

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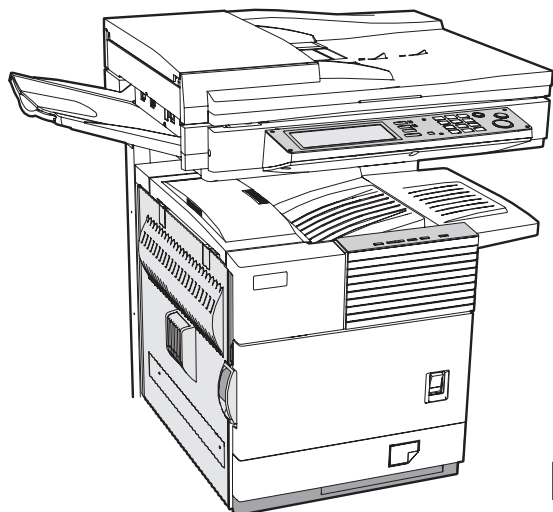
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LASER PRINTER (MULTI FUNCTION)

AR-M350

AR-M450

OPTION: AR-EF1

AR-M11

AR-RK1

MODEL

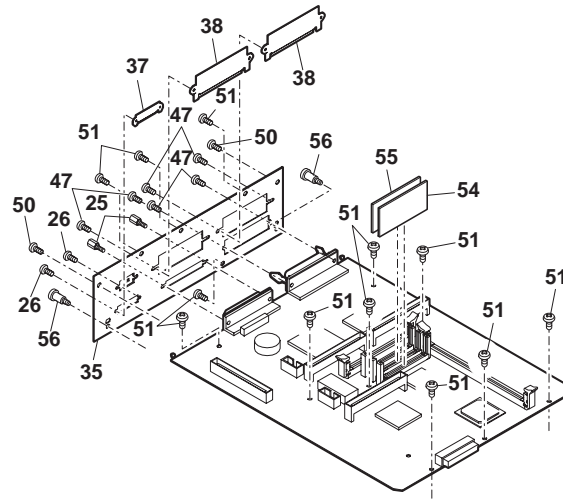
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The AR-M350 / AR-M450 Parts Guide describes only the parts change from AR-P350 / AR-P450 Parts Guide. for the common parts, please refer to the AR-P350 / AR-P450(CODE : 00ZAR350LPP1/) Parts Guide.

The definition of each Rank is as follows and also noted in the list

12 Controller BOX unit



FCP05045

17 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	SPAKC6122DS18	AU	N	D	Packing case [ARM350][STCL,SRS,SRSSC]
	SPAKC6122DS19	AU	N	D	Packing case [ARM350][China]
	SPAKC6122DS17	AU	N	D	Packing case [ARM350][other countries]
	SPAKC6122DS21	AU	N	D	Packing case [ARM450][STCL,SRS,SRSSC]
	SPAKC6122DS22	AU	N	D	Packing case [ARM450][China]
	SPAKC6122DS20	AU	N	D	Packing case [ARM450][other countries]
	SPAKC6118DS12	AU	N	D	Packing case [ARM450M][Japan]
	SPAKC6118DS13	AU	N	D	Packing case [ARM450M][Japan]
13	PSHEP4927FCZ2	AM	N	D	Key sheet [French]
	PSHEP4927FCZ1	AR	N	D	Key sheet [Germany]
	PSHEP4927FCZ2	AM	N	D	Key sheet [Spanish]
	PSHEP4927FCZ3	AR	N	D	Key sheet [Italian]
	PSHEP4927FCZ4	AR	N	D	Key sheet [Dutch]
	PSHEP4927FCZ5	AR	N	D	Key sheet [Swedish]
	PSHEP4927FCZ6	AR	N	D	Key sheet [Norwegian]
	PSHEP4927FCZ7	AR	N	D	Key sheet [Finnish]
	PSHEP4927FCZ8	AR	N	D	Key sheet [Danish]
	PSHEP4927FCZ9	AR	N	D	Key sheet [Hungarian]
20	PSHEP4927FC10	AR	N	D	Key sheet [Czechoslovakia]
	PSHEP4927FC11	AR	N	D	Key sheet [Polish]
	TINSE2181FCZZ	AT	N	D	Operation manual [USA]
	TINSJ2076FCZZ	AQ	N	D	Operation manual COPY [Japan]
	TINSE2077FCZZ	AQ	N	D	Operation manual COPY [USA]
	TINSE2078FCZZ	AW	N	D	Operation manual COPY [English]
	TINSF2079FCZZ	AW	N	D	Operation manual COPY [French]
	TINSG2080GHZZ	AS	N	D	Operation manual COPY [German]
	TINSE2081GHZZ	AS	N	D	Operation manual COPY [U Kingdom]
	TINSS2082FCZZ	AW	N	D	Operation manual COPY [Spanish]
	TINSI2083GHZZ	AS	N	D	Operation manual COPY [Italian]
	TINSH2084GHZZ	AS	N	D	Operation manual COPY [Dutch]
	CINSR2085FC51	AS	N	D	Operation manual COPY [Russian]
	CINSZ2086FC51	AS	N	D	Operation manual COPY [Arabic]
	TINSE2087FCZZ	AX	N	D	Operation manual COPY [Hong Kong]
	TINSW2089GHZZ	AS	N	D	Operation manual COPY [Swedish]
	TINSZ2090GHZZ	AS	N	D	Operation manual COPY [Norwegian]
	TINSZ2091GHZZ	AS	N	D	Operation manual COPY [Finnish]
	TINSD2092GHZZ	AS	N	D	Operation manual COPY [Danish]
	TINSZ2093GHZZ	AS	N	D	Operation manual COPY [Hungarian]
	TINSZ2094GHZZ	AS	N	D	Operation manual COPY [Czechoslovakia]
	TINSZ2095GHZZ	AS	N	D	Operation manual COPY [Polish]
	TINSJ2118FCZZ	AN	N	D	Operation manual SCANNER [Japan]
	TINSE2119FCZZ	AN	N	D	Operation manual SCANNER [USA]
	TINSE2120FCZZ	AV	N	D	Operation manual SCANNER [English]
	TINSF2121FCZZ	AV	N	D	Operation manual SCANNER [French]
	TINSG2122GHZZ	AS	N	D	Operation manual SCANNER [German]
	TINSE2123GHZZ	AS	N	D	Operation manual SCANNER [U Kingdom]
	TINSS2124FCZZ	AV	N	D	Operation manual SCANNER [Spanish]
	TINSI2125GHZZ	AS	N	D	Operation manual SCANNER [Italian]
	TINSH2126GHZZ	AS	N	D	Operation manual SCANNER [Dutch]
	CINSR2127FC51	AR	N	D	Operation manual SCANNER [Russian]
	CINSZ2128FC51	AR	N	D	Operation manual SCANNER [Arabic]
	TINSE2129FCZZ	AV	N	D	Operation manual SCANNER [Hong Kong]
	TINSW2131GHZZ	AS	N	D	Operation manual SCANNER [Swedish]
	TINSZ2132GHZZ	AS	N	D	Operation manual SCANNER [Norwegian]
	TINSZ2133GHZZ	AS	N	D	Operation manual SCANNER [Finnish]
	TINSD2134GHZZ	AS	N	D	Operation manual SCANNER [Danish]
	TINSZ2135GHZZ	AS	N	D	Operation manual SCANNER [Hungarian]
	TINSZ2136GHZZ	AS	N	D	Operation manual SCANNER [Czechoslovakia]
	TINSZ2137GHZZ	AS	N	D	Operation manual SCANNER [Polish]

26 MFP Control PWB (ARM350/M450/350M/450M/ARM11)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCAPH0010GCZZ	AD		D	Jumper (JM-2W-96) [JP2,3,4,5,6,7]
2	PCOVP1468FCZZ	AD		D	FAX battery cover
3	QCNCM0041QSZZ	AP		C	Connector (TX25-100P12) [CN2,9,12]
4	QCNCM1146FCZZ	AE	N	C	Connector (9A12-1034) [CN14]
5	QCNCM1148FCZZ	AP	N	C	Connector (TX25100P6ST) [CN16]
6	QCNCW0946FCZZ	AH		C	Connector (36pin) [CN1]
7	QCNCW1147FCZZ	AL	N	C	Connector (TX2450RLTH1) [CN13]
8	QCNCW1149FCZZ	AN	N	C	Connector (8AL068S305C) [CN8]
9	QFS-D132CQCZZ	AG		A	Fuse (1.25/250T) [F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder (TP00351-31) [F1]
11	QPIN-0003GCZZ	AC		C	Pin (T3B-SQ) [JP2,3,4,5,6,7]
12	QSOCZ0001QSZZ	AL		C	Socket (DMM168-FLAA2-3A133) [CN3]
13	QSOCZ0073FCZZ	AL		C	Connector (72pin) [CN4,5,6]
14	QSOCZ0079FCZZ	AN		C	Connector (100pin) [AR350M/450M][CN7]
15	QSOCZ6428ACZZ	AE		C	IC socket (28pin) [IC36]
16	RCRSP6676RCZZ	AG		B	Crystal (32.768KHz) [X6]
17	RCRUA0005FCZZ	AP		B	Crystal (14.745) [X7]
18	RCRUA0007FCZZ	AP		B	Crystal (31.554) [X4]
19	RCRUA0008FCZZ	AP		B	Crystal (40.57M) [X2]
20	RCRUA0009FCZZ	AP		B	Crystal (66.666MHZ) [X3,5]
21	RCRUA0012FCZZ	AP		B	Crystal (66M) [X1]
22	RFILN0048FCZZ	AC		C	Coil (BLM10B121SB) [L2,3]
23	RFILN0051FCZZ	AC	N	C	Coil (MMZ1608D121B) [L25-30,33,34]
24	RMPTR4100ACZZ	AB		B	Block resistor (10Ω×4) [BR6-13,15-25,28,29]
	RMPTR4100ACZZ	AB		B	Block resistor (10Ω×4) [BR33-44,46,48,53-72]
25	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR1-5,14,26,27,30,31,32]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR74,76,78,80-102]
26	RMPTR4330ACZZ	AB		B	Block resistor (33Ω×4) [BR47,49,50,51,73,75,77,79]
27	RMPTR4472ACZZ	AB		B	Block resistor (4.7KΩ×4) [BR52,45]
28	UBATI0014FCZZ	AN		B	Battery (CR2477-H01) [BT1]
29	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF) [C7,8,10,17,18,20,22,30,33]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF) [C35,38,39,40,43,47,48,51]
30	VCCCCZ1HH220J	AA		C	Capacitor (50WV 22pF) [C61]
31	VCEAPH1HC105M	AC		C	Capacitor (50WV 1μF) [C181,188,205,206]
32	VCEAPS1AC227M	AD		C	Capacitor (10WV 220μF) [C309,310]
	VCEAPS1CC106M	AC		C	Capacitor (16WV 10μF) [C1,6,21,75,94,111,125,165]
33	VCEAPS1CC106M	AC		C	Capacitor (16WV 10μF) [C166,169,178,179,223,224]
34	VCEAPS1CC226M	AC		C	Capacitor (16WV 22μF) [C57,64,90,114,115,136,170,176]
35	VCEAPS1CC476M	AC		C	Capacitor (16WV 47μF) [C95,167,168,180]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C3,9,11,12,13,14,23-29]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C31,32,34,36,37,41,42,44,45]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C46,49,50,52,53,54,55,56]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C58,59,60,62,63,65,66,67]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C68,70,71,72,73,74,76-82]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C85,86,87,88,89,91,92,93]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C96,97,98,99,100,102-108]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C110,112,113,116-124,126]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C127,128,130,131,132,133]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C134,135,137,139,140-145]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C149,151,153-164,172,173]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C177,182,183,185,186,187]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C189-199,201,202,204]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C208-222,235-262]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF) [C264-279,292-303]
37	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C129]
38	VCKYCZ1HF103Z	AA		C	Capacitor (50WV 0.01μF) [C69,109]
39	VHDDAP202U/-1	AB		B	Diode (DAP202U) [D7,10]
40	VHDB451F/-1	AD		B	Diode (RB451F) [D12,14,20,21]
41	VHDLRS73/-1	AA		B	Diode (RLS73) [D8,9]
42	VHi65946P07-1	BA		B	IC (65946P07) [IC32]
43	VHi74LCX08MTC	AE		B	IC (74LCX08MTC) [IC46,26]
44	VHi74LCX14MTC	AE		B	IC (74LCX14MTC) [IC43]
45	VHi74LCX244MT	AG		B	IC (74LCX244MT) [IC12]
46	VHi74LCX32MTC	AE		B	IC (74LCX32MTC) [IC11]
47	VHi74LVX16128	AP		B	IC (74LVX16128) [IC15]
48	VHi90LV17AW-1	AP		B	IC (90LV17AW) [IC18]
49	VHiDS14C238/-	AT		B	IC (DS14C238) [IC42]
50	VHiEEP64-120P	AW		B	IC (EEP64-120P) [IC36]
51	VHiHG73C095-1	AY		B	IC (HG73C095) [IC53]
52	VHiKS0U1347-1	BN		B	IC (KS0U1347) [IC19]
53	VHiLCX157MT-1	AG		B	IC (LCX157MT) [IC14]
54	VHiLCX16244-1	AM		B	IC (LCX16244) [IC21,49,50]
55	VHiLCX16245-1	AM		B	IC (LCX16245) [IC16,24,31,51,52]
56	VHiLCX16373-1	AM		B	IC (LCX16373) [IC34]
57	VHiLCX74MTC-1	AE		B	IC (LCX74MTC) [IC10]
58	VHiLM393D+-1	AE		B	IC (LM393D) [IC39]
59	VHiLVT240MT-1	AL		B	IC (LVT240MT) [IC8]
60	VHiM87J4810-1	BK		B	IC (M87J4810) [IC25]
61	VHiN2370R04-1	AF		B	IC (N2370R04) [IC23]
62	VHiN2370R33-1	AF		B	IC (N2370R33) [IC54]

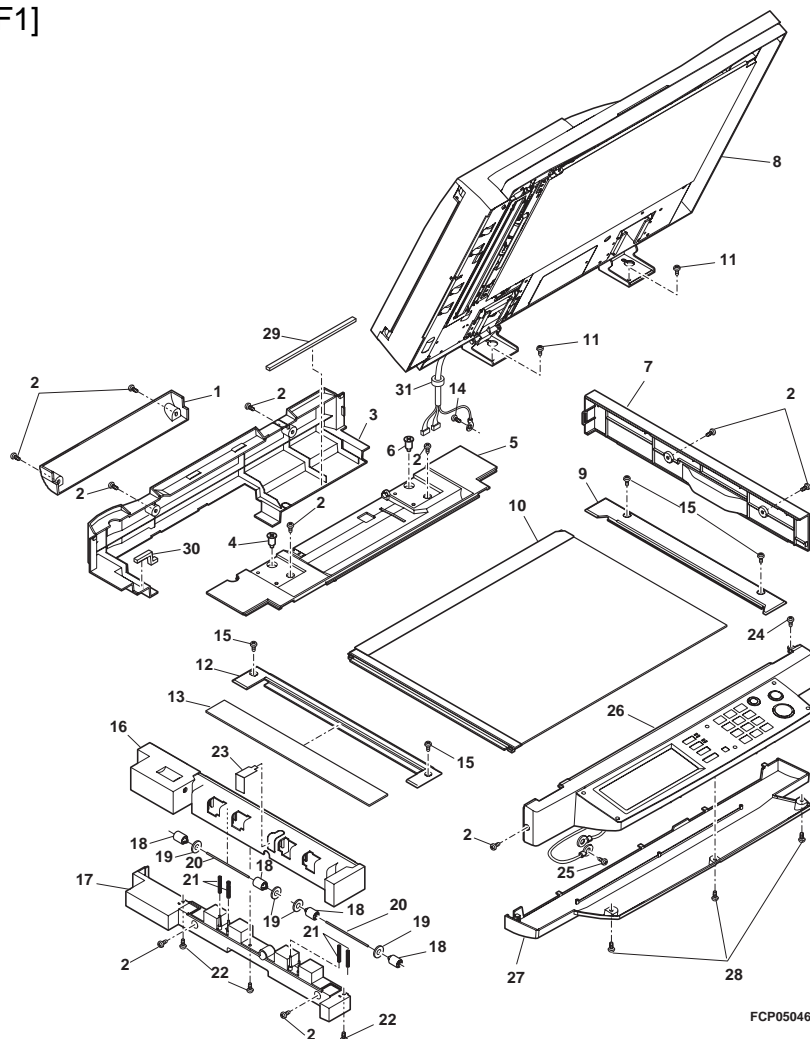
26

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
63	VH i N 2 3 9 1 D 2 5 - 1	AG		B	IC (N2391D25) [IC35,33]
64	VH i N J M 3 1 7 D L - 1	AK		B	IC (NJM317DL) [IC2]
65	VH i N J U 6 3 5 6 E - 1	AK		B	IC (NJU6356E) [IC40]
66	VH i P i 6 C 2 3 0 9 - 1	AR		B	IC (PI6C2309) [IC9,29]
67	VH i P M 2 5 0 0 + + - 1	BP		B	IC (PM2500) [IC13]
68	VH i P S T 5 9 8 D N - 1	AF		B	IC (PST598DN) [IC47]
69	VH i P S T 5 9 8 i N - 1	AF		B	IC (PST598I) [IC48]
70	VH i S D 4 M 1 6 L 1 - 1	AZ		B	IC (SD4M16L1) [IC22]
71	VH i S D 8 M 1 6 L 1 - 1	BB		B	IC (SD8M16L1) [IC4,5,6,7,27]
72	VH i S R 1 0 2 4 - 7 L L	AU		B	IC (SR1024-7LL) [IC55,56]
73	VH i T 4 9 5 5 A 2 0 - 1	BF		B	IC (T4955A20) [IC20]
74	VH i T D 6 2 5 0 3 F - 1	AF		B	IC (TD62503F) [IC38,41,44,45]
75	VHP 1 L HEE - 0 0 2 A	AC		B	LED (Red) (1LHEE-002A) [D13]
76	VHV 1 6 0 8 C 0 8 0 - 1	AC		B	Varistor (1608C080) [RV1-6]
77	VHV i C P S 1 . 2 / - 1	AF		B	IC protecrot (ICPS1.2) [Q1]
78	VRS - C Z 1 J D 0 0 0 J	AA		C	Resistor (1/16W 0Ω ±5%) [R1,3,32,33,49,77,94,97,106]
	VRS - C Z 1 J D 0 0 0 J	AA		C	Resistor (1/16W 0Ω ±5%) [R108,120,141,166,198,220,222]
	VRS - C Z 1 J D 0 0 0 J	AA		C	Resistor (1/16W 0Ω ±5%) [R225,229,232,233,290-307]
	VRS - C Z 1 J D 0 0 0 J	AA		C	Resistor (1/16W 0Ω ±5%) [R310-348,399,400,406]
	VRS - C Z 1 J D 0 0 0 J	AA		C	Resistor (1/16W 0Ω ±5%) [R407,409,410,413,414]
79	VRS - C Z 1 J D 1 0 0 J	AA		C	Resistor (1/16W 10Ω ±5%) [R36,59,64,65,96,116,118,126]
	VRS - C Z 1 J D 1 0 0 J	AA		C	Resistor (1/16W 10Ω ±5%) [R127,136,137,149,161,170,177,185]
80	VRS - C Z 1 J D 1 0 1 J	AA		C	Resistor (1/16W 100Ω ±5%) [R9,10,101,102,109,180]
	VRS - C Z 1 J D 1 0 1 J	AA		C	Resistor (1/16W 100Ω ±5%) [R181,183,235,236]
81	VRS - C Z 1 J D 1 0 2 J	AA		C	Resistor (1/16W 1.0KΩ ±5%) [R11,129,130,134,151,204]
	VRS - C Z 1 J D 1 0 2 J	AA		C	Resistor (1/16W 1.0KΩ ±5%) [R205,243,244,253,268,279]
82	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R12,13,15,16,18,20,44,45]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R60,61,62,70,72,73,86,91]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R93,112,115,123,131,139]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R144,154,158,159,160,163]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R165,167,168,203,207,208]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R213,216,217,230,237,238]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R239,240,241,242,245,246]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R249,254,259,260,261,263]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R264,267,269,271,272,273]
	VRS - C Z 1 J D 1 0 3 J	AA		C	Resistor (1/16W 10KΩ ±5%) [R274,282,283,284,285]
83	VRS - C Z 1 J D 1 8 3 J	AA		C	Resistor (1/16W 18KΩ ±5%) [R275,280]
84	VRS - C Z 1 J D 2 2 0 J	AA		C	Resistor (1/16W 22Ω ±5%) [R14,17,19,24,27,30,31,34]
	VRS - C Z 1 J D 2 2 0 J	AA		C	Resistor (1/16W 22Ω ±5%) [R35,37,39,40,43,46,51,54]
	VRS - C Z 1 J D 2 2 0 J	AA		C	Resistor (1/16W 22Ω ±5%) [R57,247,252]
85	VRS - C Z 1 J D 2 2 1 J	AA		C	Resistor (1/16W 220Ω ±5%) [R403,404]
	VRS - C Z 1 J D 2 2 2 J	AA		C	Resistor (1/16W 2.2KΩ ±5%) [R199,200,209,210,211,212]
86	VRS - C Z 1 J D 2 2 2 J	AA		C	Resistor (1/16W 2.2KΩ ±5%) [R218,223,248,265,266,276]
	VRS - C Z 1 J D 3 3 0 J	AA		C	Resistor (1/16W 33Ω ±5%) [R25,38,41,47,48,52,56,58,66]
	VRS - C Z 1 J D 3 3 0 J	AA		C	Resistor (1/16W 33Ω ±5%) [R67,68,69,92,117,138,142]
	VRS - C Z 1 J D 3 3 0 J	AA		C	Resistor (1/16W 33Ω ±5%) [R143,147,148,152,153,173]
	VRS - C Z 1 J D 3 3 0 J	AA		C	Resistor (1/16W 33Ω ±5%) [R174,175,176,187,188,]
87	VRS - C Z 1 J D 3 3 0 J	AA		C	Resistor (1/16W 33Ω ±5%) [R214,288,289]
	VRS - C Z 1 J D 3 3 2 J	AA		C	Resistor (1/16W 3.3KΩ ±5%) [R215,119]
88	VRS - C Z 1 J D 3 3 3 J	AA		C	Resistor (1/16W 33KΩ ±5%) [R179,107]
90	VRS - C Z 1 J D 4 7 0 J	AA		C	Resistor (1/16W 47Ω ±5%) [R53,55,308,309]
	VRS - C Z 1 J D 4 7 2 J	AA		C	Resistor (1/16W 4.7KΩ ±5%) [R63,71,74,76,87,100,111,121]
	VRS - C Z 1 J D 4 7 2 J	AA		C	Resistor (1/16W 4.7KΩ ±5%) [R122,124,128,133,146,162,164]
	VRS - C Z 1 J D 4 7 2 J	AA		C	Resistor (1/16W 4.7KΩ ±5%) [R184,206,221,224,226,227,228]
	VRS - C Z 1 J D 4 7 2 J	AA		C	Resistor (1/16W 4.7KΩ ±5%) [R231,250,251,262,270,277]
92	VRS - C Z 1 J D 5 1 1 J	AA		C	Resistor (1/16W 510Ω ±5%) [R278]
93	VRS - C Z 1 J D 7 5 0 J	AA		C	Resistor (1/16W 75Ω ±5%) [R114,145]
94	VRS - C Z 1 J D 8 2 3 J	AA		C	Resistor (1/16W 82KΩ ±5%) [R202]
95	VSDTC 1 1 4 EK / - 1	AB		B	Transistor (DTC114EK) [Q3]
96	VSDTC 1 1 4 YK / - 1	AC		B	Transistor (DTC114YK) [Q4]
97	V SUP A 5 0 2 T / / - 1	AD		B	Transistor (UPA502T) [Q5,6,7]

27 Exteriors[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	GCAB-0943FCZZ	AK	N	D	Rear lower cabinet
2	XHBSE40P08000	AA		C	Screw (4x8)
3	PCÖVP1566FCZZ	AS	N	D	Upper cabinet rear cover
4	LX-BZ0842FCZZ	AG		C	SPF screw
5	GCAB-0942FCZZ	AP	N	D	Upper cabinet rear
6	LX-BZ0776FCZZ	AG		C	Screw R
7	GCAB-0945FCZZ	AR	N	D	Upper cabinet right
8	DUNT-7133DSZZ	CZ	N	E	DSPF unit
9	DUNT-7132DSZZ	CY	N	E	SPF unit
10	LFI X-0544FCZZ	AG	N	D	Glass fixing right
11	CGLSP0003RS51	BC	N	B	Table glass (Japan)
12	CGLSP0003RS52	BF	N	B	Table glass EX (Except Japan)
13	XBTSC50P16000	AA		C	Screw (5x16)
14	LFI X-0543FCZZ	AG	N	D	Glass fixing left
15	CGLSP0102DS51	BF	N	B	White datum glass unit
16	XHBSD30P06000	AA		C	Screw (3x6)
17	XBTSE40P06000	AA		C	Screw (4x6)
18	PGiDM1900FCZZ	AR	N	C	Delivery upper PG SPF
19	PGiDM1901FCZZ	AQ	N	C	Delivery lower PG
20	NROLP0011QSZZ	AD		C	Delivery support roller
21	PSPÖ-0001QSZZ	AB		C	Sponge
22	NSFTZ2601FCZZ	AH	N	C	Delivery support roller shaft 1
23	MSPRC2865FCZ1	AB	N	C	Delivery support spring
24	XEBSE30P08000	AA		C	Screw (3x8)
25	PCÖVP1624FCZZ	AC	N	D	Stamp cover
26	LX-BZ0465FCZZ	AA		C	Screw (4x6)
27	XHBSD30P08000	AA		C	Screw (3x8)
28	CPNLC0244DS51	CV	N	D	MFP operation panel (Japan)
29	CPNLC0244DS52	CT	N	D	MFP operation panel (Except Japan)
30	LDAiU0627FCZZ	AZ	N	D	Operation base
31	XEBSE40P08000	AA		C	Screw (4x8)
32	PMLT-1256FCZZ	AC	N	C	Dustproof cushion 1
33	PMLT-1257FCZZ	AB	N	C	Dustproof cushion 2
34	RCORF0041FCZZ	AH	N	C	Core (UFR25-12-15)

27 Exteriors[AR-EF1]

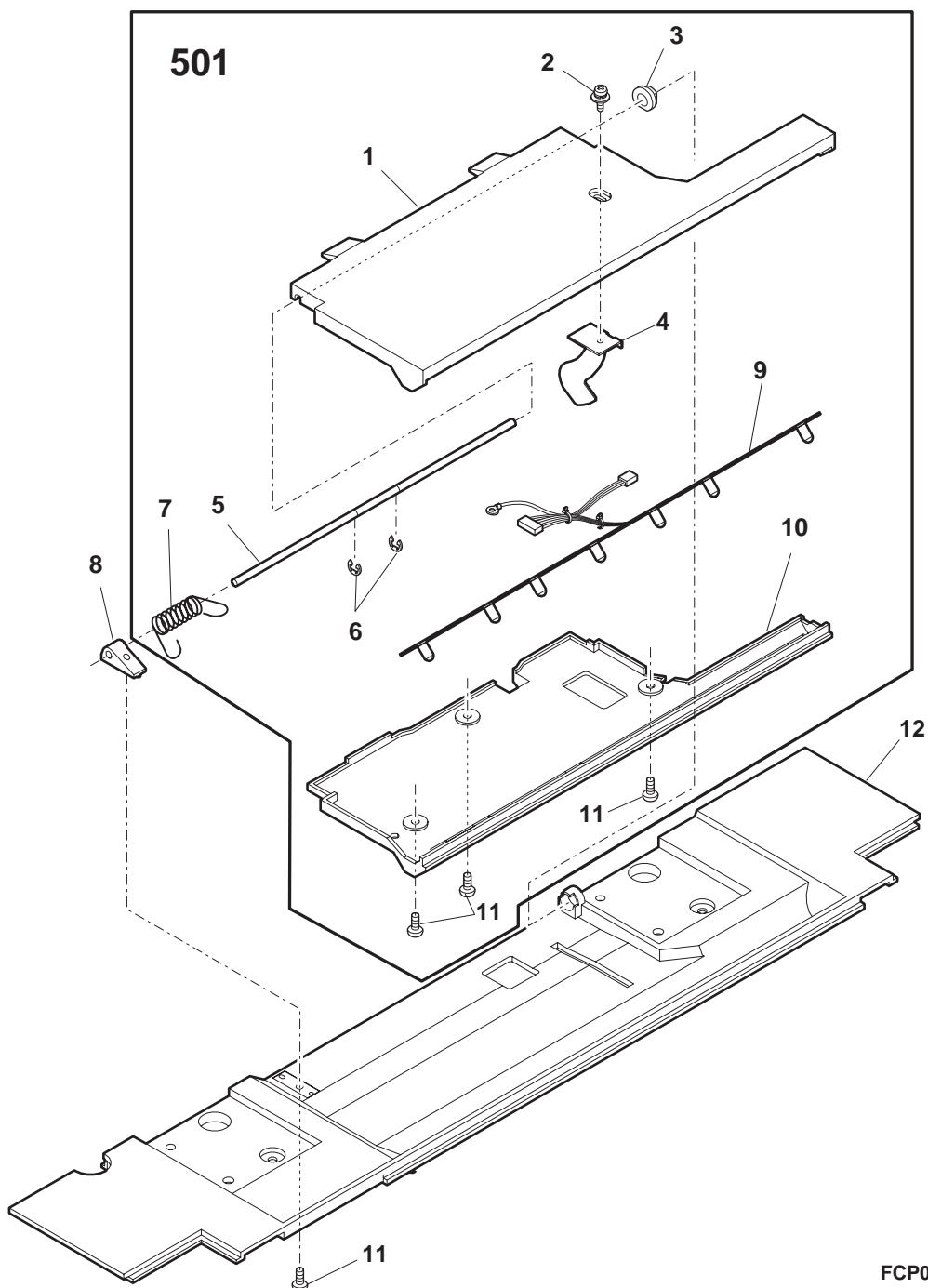


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28 Original detect unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	MARMP0148FCZ2	AK	N	C	Original detect arm lower
2	XBPSD30P06KS0	AA		C	Screw (3x6KS)
3	LBSHZ1102CCZZ	AC		C	Rubber roller bushing 1
4	PSLDH0178FCZZ	AD		C	Original detect shield plate
5	NSFTZ1805FCZZ	AE		C	Original detect fulcrum shaft
6	XRESP30-06000	AA		C	E type ring
7	MSPRT1563FCZZ	AC		C	Original detect spring
8	LHLDZ1085FCZZ	AD	N	C	Original detect fulcrum TIG
9	CPWBF1453FCE1	BN	N	E	ORS emission PWB
10	MARMP0147FCZ2	AK	N	C	Original detect arm upper
11	XEPSD30P05000	AA		C	Screw (3x5)
12	GCAB-0942FCZZ	AP	N	D	Upper cabinet rear
501	CARMP0147DS51	BA	N	E	ORS emission unit

28 Original detect unit[AR-EF1]

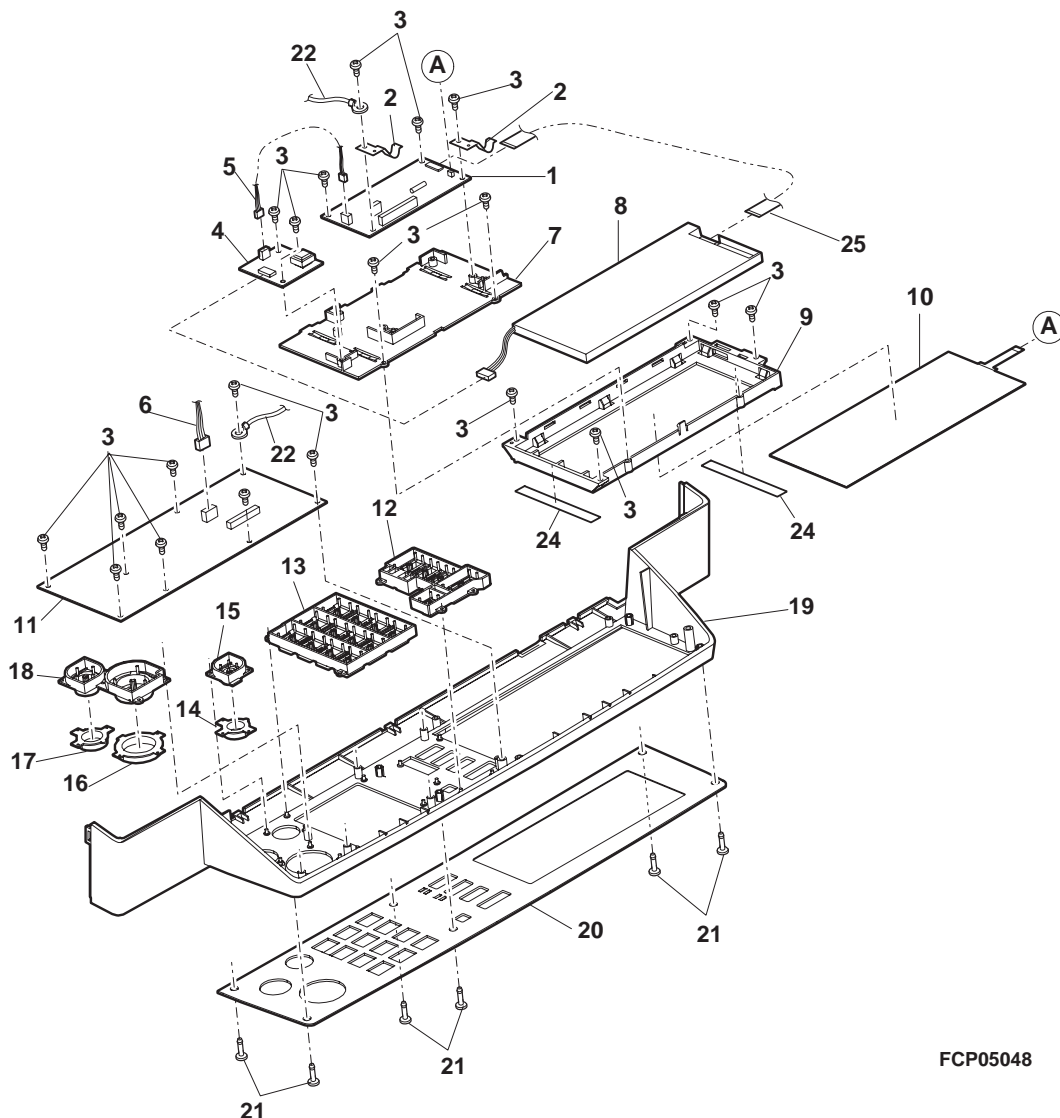


FCP05047

29 Operation panel unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CPWBN1471FCE1	BF	N	E	LVDS PWB
2	MSPRP3009FCZZ	AD	N	C	LCD earth plate spring
3	XEPSD30P08000	AA	N	C	Screw (3×8)
4	CPWBF1470DS51	BN	N	E	Inverter PWB
5	DHAI-3192FCZZ	AD	N	C	INV interface harness
6	DHAI-3191FCZZ	AF	N	C	ORS PD harness
7	LHLDZ1459FCZZ	AE	N	C	LCD holder B
8	VVLLM065HB1-1	CB	N	B	LCD module
9	LHLDZ1458FCZZ	AF	N	C	LCD holder A
10	HPNLH0246FCZZ	BF	N	D	Touch panel
11	CPWBF1469FCE1	BN	N	E	MFP OPE PWB
12	CBTN-0253FC01	AN	N	E	Change key Assy
13	CBTN-0252FC01	AP	N	E	Ten key Assy
14	CFILW0284FC01	AF	N	D	C key smoke Assy
15	CBTN-0251FC01	AF	N	E	C key Assy
16	CFILW0282FC01	AF	N	D	Copy key smoke Assy
17	CFILW0283FC01	AF	N	D	CA key smoke Assy
18	CBTN-0250FC01	AH	N	E	Copy key Assy
19	HPNLC0244FCZZ	AZ	N	D	Operation panel A
20	CPNLC0245FC01	AY	N	D	Operation panel B
	CPNLC0245FC02	AY	N	D	Operation panel B EX-E
21	LPINS0014QSGZ	AC	N	C	Fixing pin C
22	DHAI-3193FCZZ	AC	N	C	Panel earth harness
24	PSHEZ4906FCZZ	AC	N	C	Touch panel sheet
25	QCNW-0166FCZZ	AE	N	C	LCD interface FFC

29 Operation panel unit[AR-EF1]

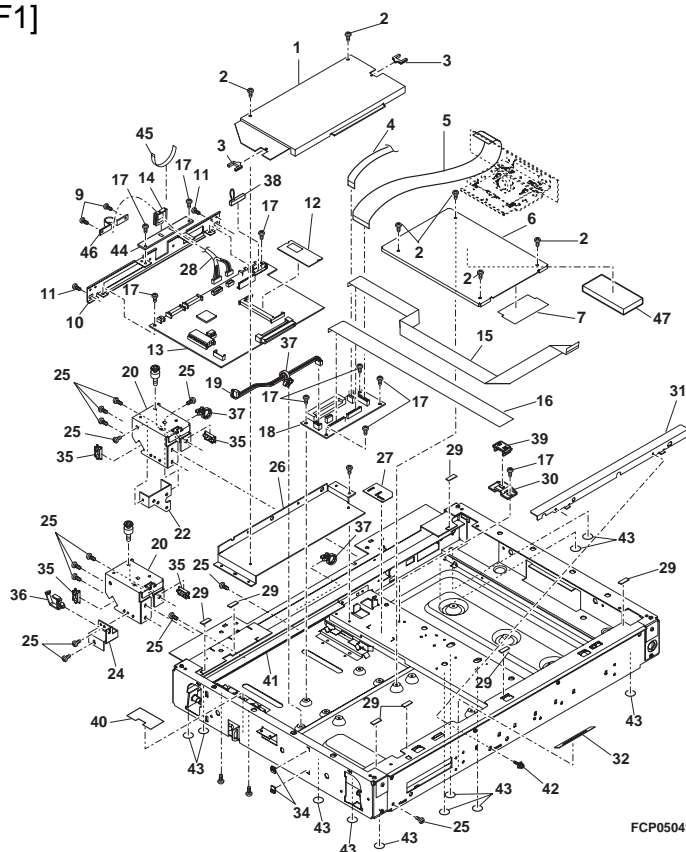


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30 Optical unit 1[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCÖVP1599FCZZ	AG	N	D	Harness cover B
2	XHBSD30P04000	AA		C	Screw (3x4)
3	LHLDW1115FCZZ	AD		C	Edge bushing
4	QCNW-0168FCZZ	AE	N	C	CL interface FFC
5	QCNW-0167FCZZ	AM	N	C	CCD interface FFC
6	PCÖVP1600FCZZ	AF	N	D	Harness cover C
7	PSHEP4932FCZZ	AD	N	C	Harness fixing sheet 4
9	XBBSE30P06000	AA		C	Screw (3x6)
10	LPLTM5723FCZZ	AG	N	C	SCN PWB fixing plate
11	XHBSE40P08000	AA		C	Screw (4x8)
12	VHi28F081L02C	BB	N	B	Scanner flash unit
13	CPWBN1450FCE1	BF	N	E	Scanner control PWB
14	LHLDW1115FCZZ	AD		C	Edge bushing
15	QCNW-0165FCZZ	AH	N	C	MFPOP interface FFC
16	QCNW-0181FCZZ	AH	N	C	LVDS interface FFC
17	XBBSD40P06000	AA		C	Screw (4x6)
18	CPWBN1451DS51	BF	N	E	Scanner interface PWB
19	DHAI-3152FCZZ	AF	N	C	Stamp interface harness
20	LPLTM5720FCZZ	AK	N	C	OC fixing plate
22	LPLTM5927FCZZ	AF	N	C	Dry heater fixing plate
24	LPLTM5877FCZZ	AE	N	C	Base reinforce plate
25	XHBSD30P06000	AA		C	Screw (3x6)
26	PCÖVP1598FCZZ	AL	N	D	Harness cover A
27	PSHEZ4842FCZZ	AD	N	C	Harness fixing sheet 2
28	DHAI-3303FCZZ	BC	N	C	MFP interface cable
29	PGUMS0283FCZ1	AA	N	C	Table glass cushion
30	LDAIU0610FCZZ	AE		D	Harness fixing base
31	LRALM0183FCZZ	AG	N	C	MB-B rail F
32	PSHEZ4843FCZZ	AC	N	C	Harness fixing sheet 3
34	LHLDW1007LCZZ	AD		C	Mini clamp (MN-1)
35	LHLDW0595FCZZ	AC		C	Edge holder (EDS2)
36	LHLDW1264FCZZ	AD		C	Wire holder (LWS-8S-2.5W)
37	LBNDJ0043FCZZ	AA		C	Snap band (SG-130)
38	DHAI-3153FCZZ	AC	N	C	PNC harness
39	LFIX-0537FCZZ	AD		C	Harness fixing plate
40	PSHEZ4841FCZ1	AD	N	C	Harness fixing sheet 1
41	LRALM0184FCZZ	AG	N	C	MB-B rail R
42	LX-BZ0004QSZZ	AB		C	Screw
43	PSHEZ4836FCZZ	AB	N	C	Screw protect sheet
44	LPLTP5960FCZZ	AE	N	C	SCN cable fixing plate
45	LHLDW1201CCZZ	AA		C	SK holder
46	LFIX-0569FCZZ	AD	N	C	SCN fixing cable
47	PMLT-1282FCZZ	AE	N	C	FFC fixing cushion

30 Optical unit 1[AR-EF1]

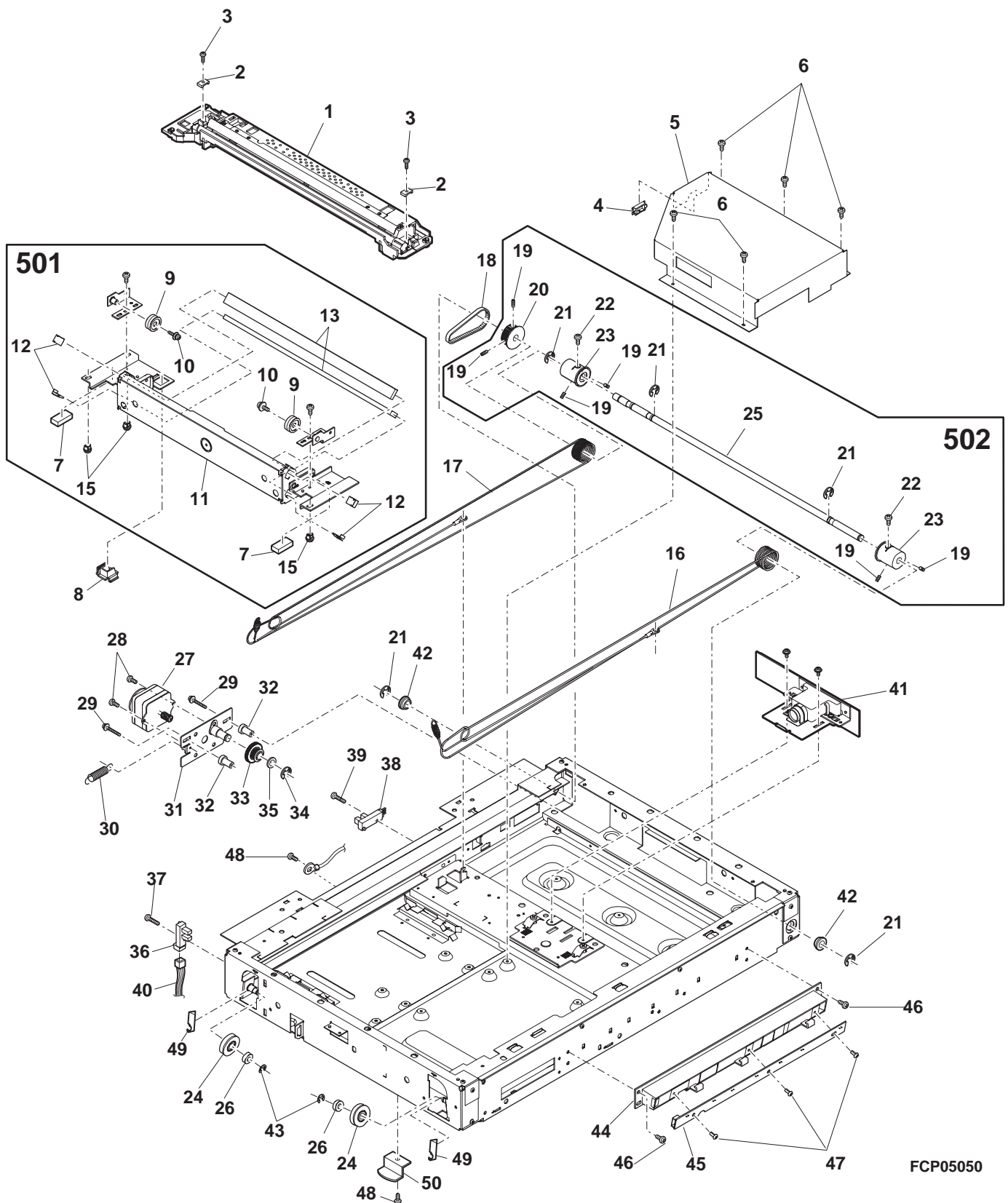


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31 Optical unit 2[AR-EF1]

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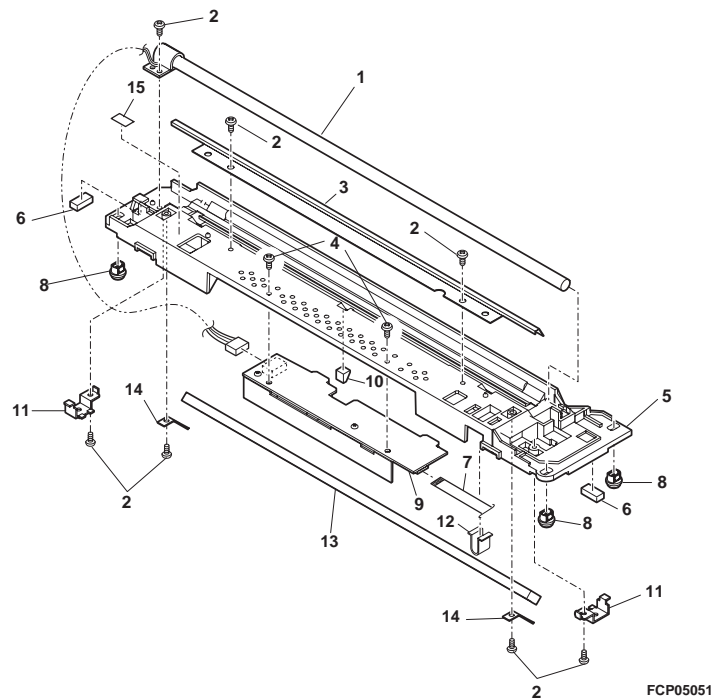
31 Optical unit 2[AR-EF1]



32 Lamp unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	RLMPD0658FCZZ	BA	N	B	Lamp
2	XEBSD30P08000	AA		C	Screw (3×8)
3	PREFL0172FCZZ	AK		B	Reflector
4	XBBSD30P12000	AA		C	Screw (3×12)
5	LDAIU0619FCZZ	AT	N	C	Lamp base
6	PCUSU0203FCZZ	AE		C	Protection cushion
7	QCNW-0168FCZZ	AE	N	C	CL interface FFC
8	MSLi-0138FCZZ	AC		C	Slider
9	CPWBF1449FC31	BH	N	E	Inverter PWB
10	PCUSF0334FCZZ	AP		C	Mirror cushion
11	LSTYM0261FCZZ	AB	N	C	Wire support plate
12	LFIX-0545FCZZ	AC	N	C	CL read harness fixing
13	PMIR-0164FCZZ	AP	N	B	1st mirror
14	MSPRP2825FCZZ	AC	N	C	Mirror spring
15	TLABZ4335FCZZ	AB		D	HV caution label
(Unit)					
901	CDAIU0619DS51	BF	N	E	Lamp unit

32 Lamp unit[AR-EF1]



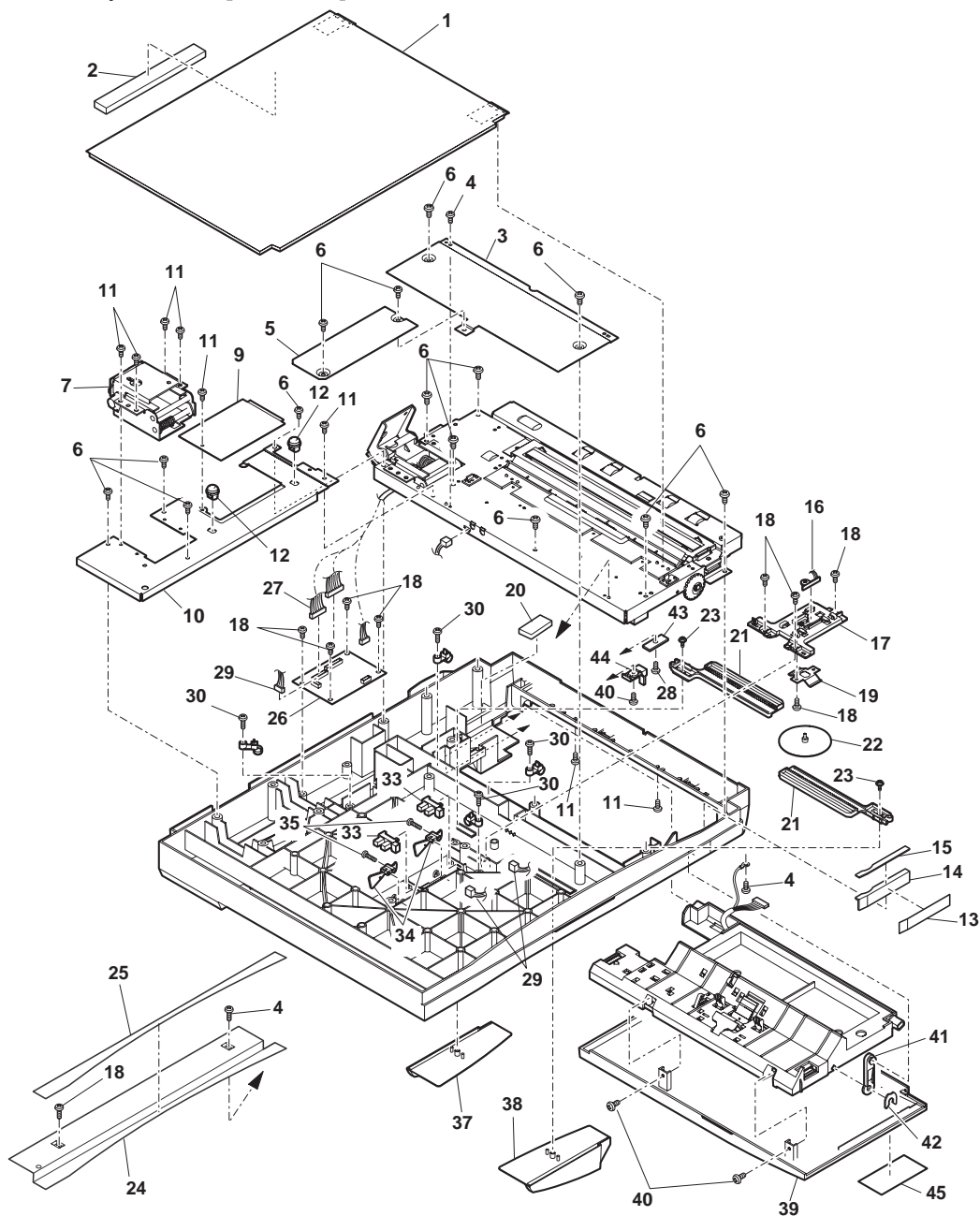
33 DSPF Assembly section[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PSHEZ4845FCZZ	AV	N	C	OC mat
2	PMLT-1286FCZZ	AD	N	C	OC cushion
3	PCÖVP1595FCZZ	AG	N	D	Rack cover
4	XHBSE30P06000	AA		C	Screw (3×6)
5	PCÖVP1615FCZZ	AE	N	D	Length detect cover N
6	XEBSE40P10000	AA		C	Screw (4×10)
7	MHNG-0208FCZZ	BA	N	C	SPF hinge R
9	PCÖVP1518FCZZ	AE		D	ICU ROM cover
10	LPLTM5887FCZZ	AL	N	C	Hinge joint plate
11	XHBSE40P08000	AA		C	Screw (4×8)
12	LFIX-0568FCZZ	AC	N	C	Original detect fixing
13	PTPE-0265FCZZ	AC	N	C	Cover tape
14	PCÖVP1644FCZZ	AD	N	C	F cover L
15	PGUMS0298FCZZ	AC	N	C	Cover rubber L
16	CPWBF1501DS51	BN	N	E	SPF VR PWB
17	LPLTP5743FCZZ	AF		C	Width detect fixing plate
18	XEBSD30P08000	AA		C	Screw (3×8)
19	MSPRP2830FCZZ	AA		C	Width detect spring
20	PGUMS0296FCZZ	AD	N	C	Cushion
21	NGERR1386FCZZ	AE		C	Width detect rack
22	NGERP1385FCZZ	AF		C	Width detect pinion
23	XEPSD30P06X00	AA		C	Screw (3×6X)
24	PCÖVP1645FCZZ	AH	N	C	F cover R
25	PGUMS0299FCZZ	AH	N	C	Cover rubber R
26	CPWBF1459DS51	BN	N	E	SPF PWB

33 DSPF Assembly section[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
27	DHAI-3166FCZZ	AY	N	C	DSPF body interface harness
28	XESSE30P08000	AA		C	Screw (3x8)
29	DHAI-3161FCZZ	AK	N	C	SPF size detect harness
30	XEBSE30P10000	AA		C	Screw (3x10)
33	VHPGP1A73A+-1	AG		B	Photo sensor (GP1A73A)
34	MLEVP0794FCZZ	AC	N	C	Length detect actuator
35	XEBSD40P16000	AA		C	Screw (4x16)
37	LPLTP5778FCZZ	AG	N	D	Adjust plate R
38	LPLTP5777FCZZ	AG	N	D	Adjust plate F
39	PCOVP1549FCZZ	AU	N	D	Upper cover
40	XEBSE30P08000	AA		C	Screw (3x8)
41	MARMP0243FCZZ	AD		C	Manual feeding tray arm
42	PRNGP0090FCZZ	AA		C	Ring (E5)
43	LPLTM2573FCZ1	AD		C	ADF MG plate
44	LPLTP5938FCZZ	AC	N	C	Shading plate N
45	TLABH4440FCZZ	AF		D	Original read label (Japan)

33 DSPF Assembly section[AR-EF1]

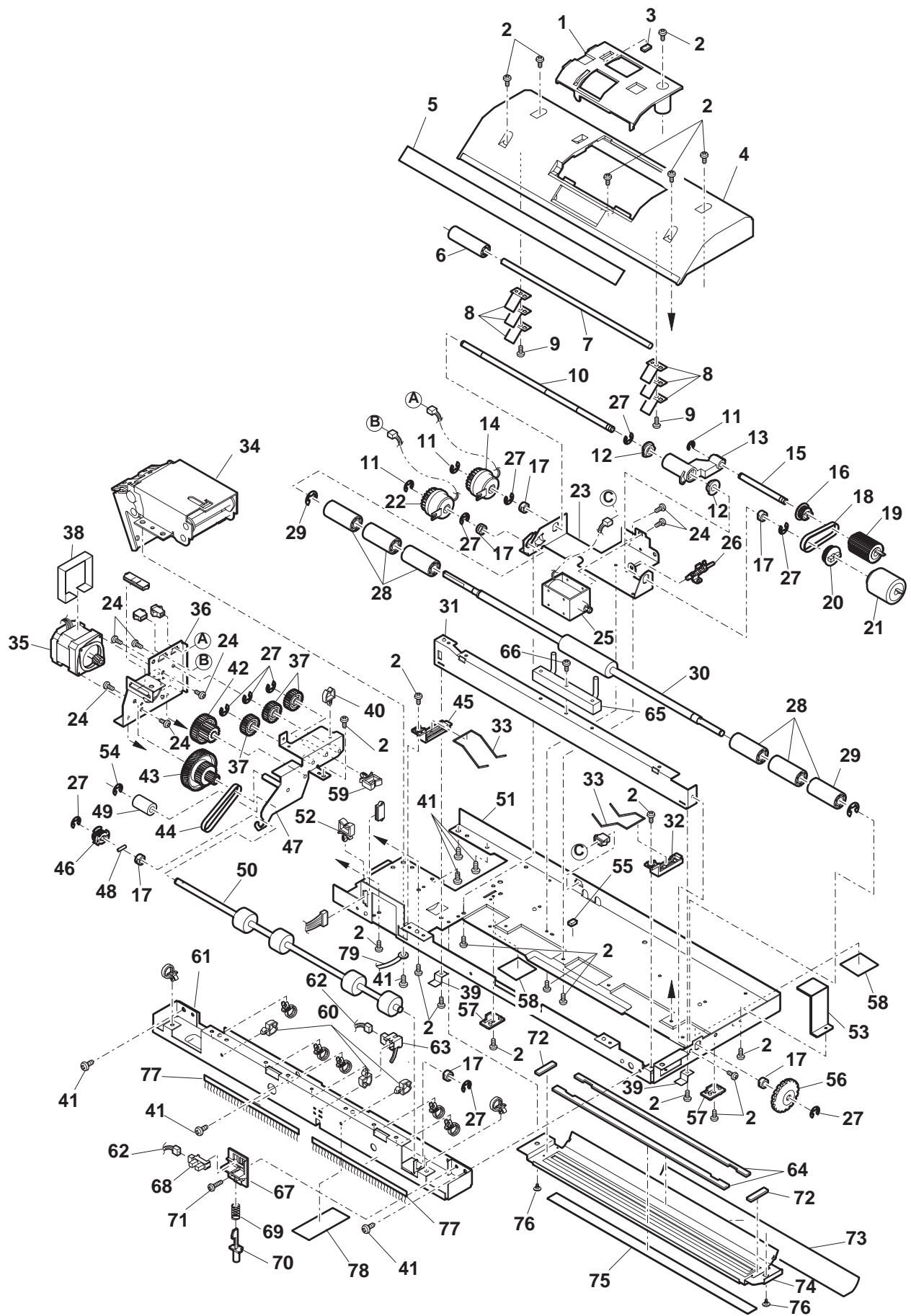


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34 DSPF Paper feed unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCÖVP1594FCZZ	AG	N	D	Roller cover
2	XHBSE30P06000	AA		C	Screw (3x6)
3	PMLT-1272FCZZ	AB	N	C	Damper cushion 3
4	PGiDM1953FCZZ	AS	N	C	Paper feed PG SPF
5	PSHEP4915FCZZ	AE	N	C	PS rear mylar
6	PCLR-0471FCZZ	AG	N	C	PS support roller
7	NSFTZ2600FCZZ	AM	N	C	PS support shaft
8	MSPRP2878FCZZ	AC	N	C	PS support plate spring
9	XEBSD30P08000	AA		C	Screw (3x8)
10	NSFTZ2599FCZ1	AW	N	C	Separate roller shaft SPF
11	XRESP40-06000	AA		C	E type ring
12	NBRGC0136FCZZ	AC		C	Bearing (M6)
13	LHLDZ1483FCZZ	AF		C	Paper feed rotation plate
14	PCLC-0303FCZZ	AT	N	B	Separate clutch
15	NSFTZ2678FCZZ	AL	N	C	Pick up shaft
16	NPLYZ0398FCZZ	AC		C	Pick up roller pulley (22P)
17	NBRGM0096FCZ1	AB		C	Bearing
18	NBLTH0363FCZZ	AG	N	B	Belt (S2M120)
19	NRÖLR1312FCZZ	AN		C	Pick up roller
20	NPLYZ0397FCZZ	AK		C	Paper feed roller pulley (28P)
21	NRÖLR1317FCZZ	AP		C	Separate roller
22	PCLC-0302FCZZ	AT	N	B	PS clutch SPF
23	LPLTM5928FCZZ	AG	N	C	Paper feed base plate SPF
24	XBBSD30P06000	AA		C	Screw (3x6)
25	RPLU-0336FCZZ	AS	N	B	Pick up solenoid
26	MARMP0284FCZZ	AC	N	C	Pick up joint arm N
27	XRESP50-06000	AA		C	E type ring
28	NRÖLP1364FCZZ	AC		C	Delivery roller M
29	XRESP70-08000	AA		C	E type ring
30	NRÖLR1318FCZZ	AR	N	C	PS roller SPF
31	LSTYM0288FCZZ	AK	N	C	CIS stay
32	LHLDZ1485FCZZ	AC	N	C	SP holder F
33	MSPRD3002FCZZ	AC	N	C	Spring N
34	MHNG-0209FCZZ	BC	N	C	DSPF hinge L
35	RMÖTS0876FCZZ	BD	N	B	SPF motor N
36	LFRM-1022FCZZ	AK	N	D	Drive frame
37	NGERH1477FCZZ	AC	N	C	Gear (24T)
38	PSHEZ4949FCZZ	AE	N	C	Motor sheet
39	MSPRP3011FCZZ	AC	N	C	Earth plate spring
40	LHLDW1009ACZZ	AA		C	Clamp
41	XHBSE40P08000	AA		C	Screw (4x8)
42	NGERH1476FCZZ	AD	N	C	Gear (35T/18T)
43	NGERH1478FCZZ	AE	N	C	Gear (55T/28T/18P)
44	NBLTH0364FCZZ	AG	N	B	Belt (S2M130)
45	LHLDZ1486FCZZ	AC	N	C	SP holder R
46	NPLYZ0375FCZZ	AC		C	Pulley (22T)
47	CPLTM5882FC02	AN	N	C	Drive plate
48	LPIINS1031HCZZ	AA		C	Spring pin
49	PCLR-0426FCZZ	AD		C	Slide roller
50	NRÖLR1320FCZZ	AQ	N	C	Delivery roller SPF
51	LPLTM5884FCZZ	AW	N	C	Base tray reinforce plate N
52	LHLDW0429FCZZ	AB		C	Wire holder (WS-2NS)
53	LPLTM5785FCZZ	AC	N	C	MG plate
54	XRESP20-04000	AA		C	E type ring
55	PMLT-1270FCZZ	AB	N	C	Damper cushion 1
56	JKNBZ0141FCZZ	AH	N	C	Jam release knob
57	LPLTM5889FCZZ	AC	N	C	Datum plate
58	PSHEP4846FCZZ	AD	N	C	OC mat mylar R
59	LHLDW2101SCZZ	AB		C	Cable clamp
60	LHLDW1009ACZZ	AA		C	Clamp
61	LPLTM5929FCZZ	AR	N	C	Delivery roller fixing plate
62	DHAi-3281FCZZ	AH	N	C	SPF delivery sensor harness
63	QSW-Z0531FCZZ	AL		B	Delivery jam sensor
64	PCUSS0372FCZZ	AD	N	C	CIS cushion 1
65	LSTPP0359FCZZ	AE	N	C	PS fornt stopper
66	XHBSD30P14000	AA		C	Screw (3x14)
67	LHLDZ1484FCZZ	AC	N	C	Open/close holder
68	VHPGP1A73A+-1	AG		B	Photo sensor (GP1A73A)
69	MSPRC3001FCZZ	AB	N	C	Open/close detect spring N
70	MLEVP0837FCZZ	AC	N	C	Open/close actuator N
71	XHBSE30P10000	AA		C	Screw (3x10)
72	PCUSS0373FCZZ	AB	N	C	CIS cushion 2
73	PSHEP4916FCZ1	AF	N	C	White mylar
74	PGiDH1897FCZZ	AT	N	C	CIS paper guide
75	PGLSP0103FCZZ	AV	N	C	CIS glass
76	LX-BZ0931FCZZ	AC	N	C	Screw (M3)
77	PBRSS0209FCZZ	AG	N	B	Discharger glass SPF
78	PSHEZ4957FCZZ	AC	N	C	Delivery sheet
79	DHAi-3336FCZZ	AB	N	C	ESD harness DSPF

34 DSPF Paper feed unit[AR-EF1]

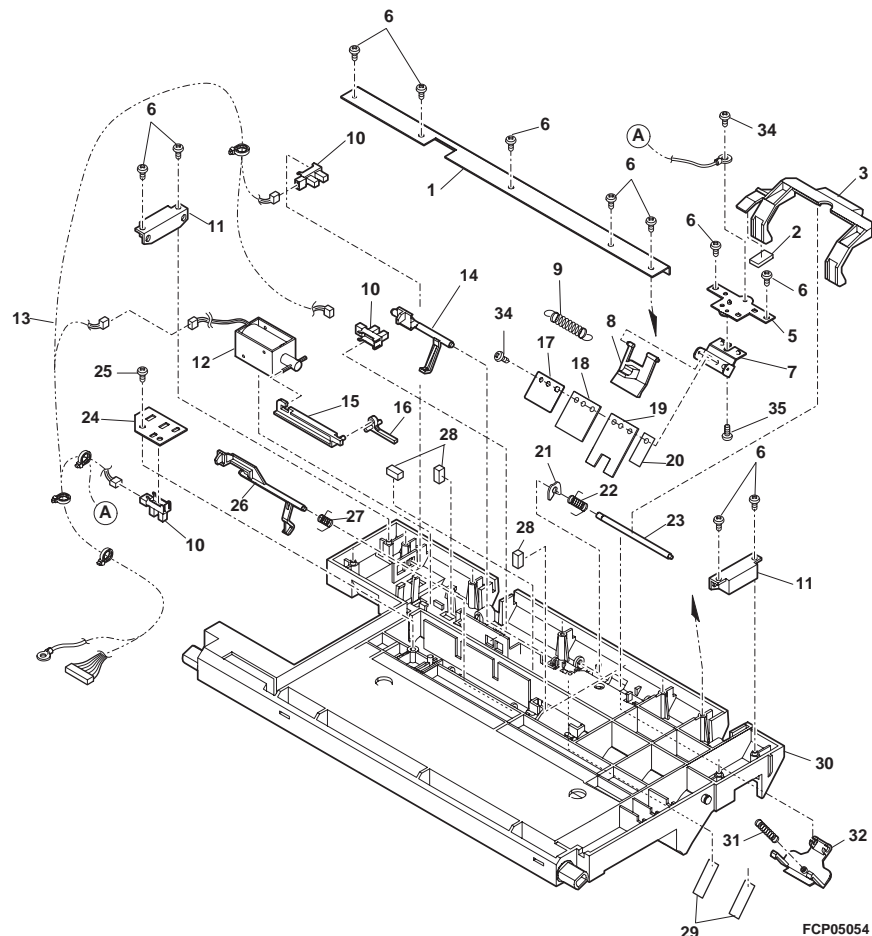


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35 DSPF Upper transfer unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LPLTM5891FCZZ	AE	N	C	Upper delivery rainforce plate
2	PMLT-1272FCZZ	AB	N	C	Damper cushion 3
3	LSTPP0353FCZZ	AE	N	C	Original stopper
5	LPLTM5930FCZZ	AD	N	C	Separate pad rainforce plate
6	XEBSD30P08000	AA		C	Screw (3×8)
7	CPLTM5746FC01	AE	N	C	Separate pad fixing plate AS
8	LPLTP5747FCZZ	AC	N	C	Separate plate
9	MSPRT2864FCZZ	AC	N	C	Pressure spring
10	VHPGP1A73A+-1	AG		B	Photo sensor (GP1A73A)
11	PMAGT0072FCZZ	AF		C	Magnet catch
12	RPLU-0347FCZZ	AQ	N	B	Gate solenoid
13	DHAI-3162FCZZ	AK	N	C	SPF paper feed harness
14	MLEVP0796FCZZ	AC	N	C	Set detect actuator
15	MARMP0248FCZZ	AE		C	MF gate joint arm
16	MLEVP0804FCZZ	AC	N	C	Stopper lever
17	MSPRP2832FCZZ	AC	N	C	Separate assistance plate spring
18	PSHEZ4878FCZZ	AC	N	C	Separate mylar upper
19	PSHEZ4847FCZZ	AL	N	C	Separate sheet
20	PSHEP4848FCZZ	AB	N	C	Separate mylar lower
21	LSTPP0314FCZZ	AA		C	E3 stopper
22	MSPRD2870FCZ1	AC	N	C	Stopper spring
23	NSFTZ2659FCZZ	AR	N	C	Fulcrum shaft
24	LPLTM5932FCZZ	AC		C	Tray 2 sensor fixing plate
25	XEBSE40P10000	AA		C	Screw (4×10)
26	MLEVP0797FCZZ	AC	N	C	PS front actuator
27	MSPRD2879FCZZ	AB	N	C	PS front actuator spring
28	PMLT-1271FCZZ	AB	N	C	Damper cushion 2
29	PSHEP4937FCZZ	AB	N	C	Fixing mylar
30	PGIDM1899FCZZ	AY	N	C	Upper delivery PG
31	MSPRT2863FCZZ	AB	N	C	Paper feed plate spring
32	LPLTP5748FCZZ	AD	N	C	Paper feed plate
34	XHBSE30P06000	AA		C	Screw (3×6)
35	XBBS230P10000	AA		C	Screw (3×10)

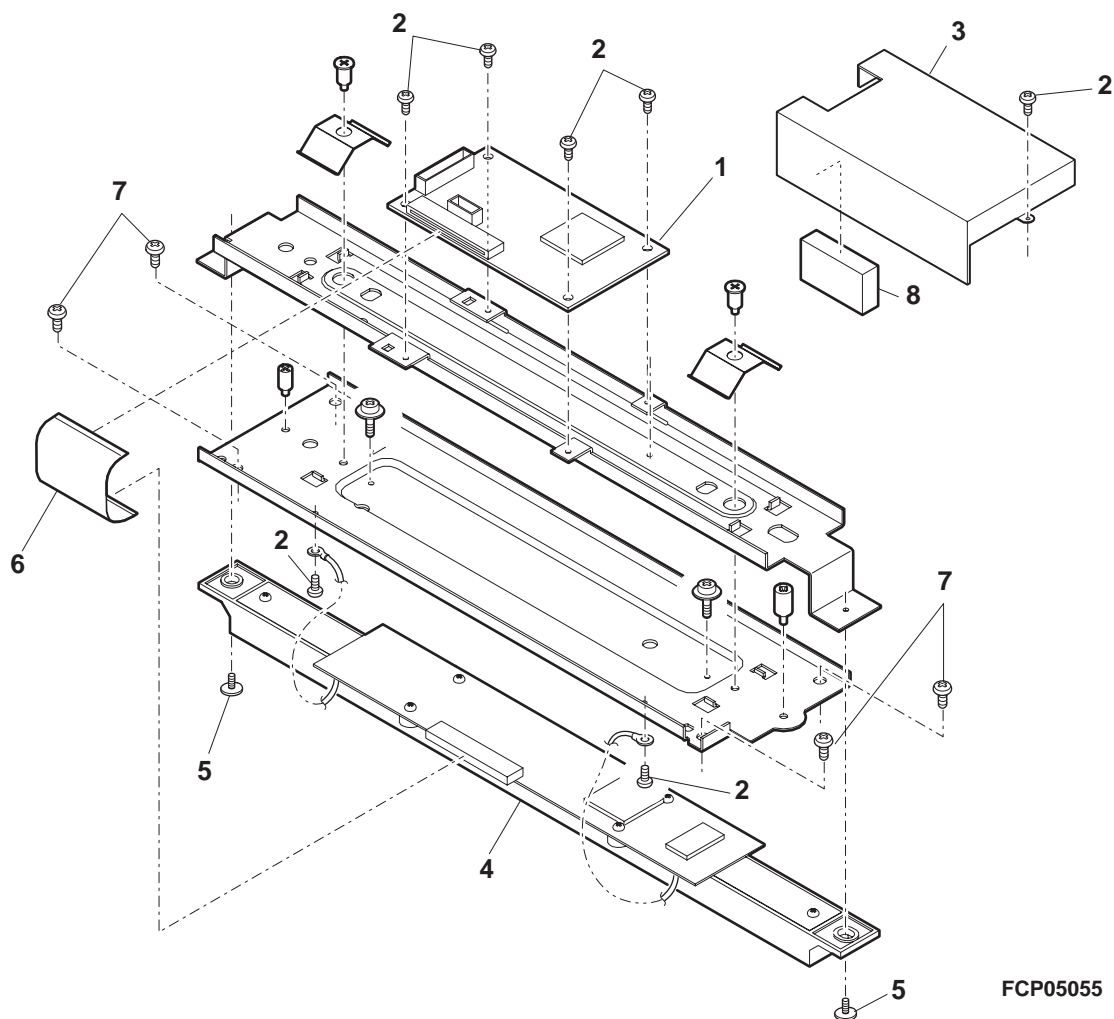
35 DSPF Upper transfer unit[AR-EF1]



36 DSPF CIS unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CPWBN1458FCE1	BF	N	E	CIS control PWB
2	XBBSD30P06000	AA		C	Screw (3x6)
3	PCÖVP1593FCZZ	AF	N	D	CIS PWB cover N
4	DUNT-7079FCZZ	CC	N	E	CIS unit
5	LX-BZ0680FCZZ	AB		C	Screw
6	QCNW-0170FCZZ	AH	N	C	CIS interface FFC
7	XBBSD40P08000	AA		C	Screw (4x8)
8	PMLT-1284FCZZ	AE	N	C	Interface FFC fixing cushion

36 DSPF CIS unit[AR-EF1]

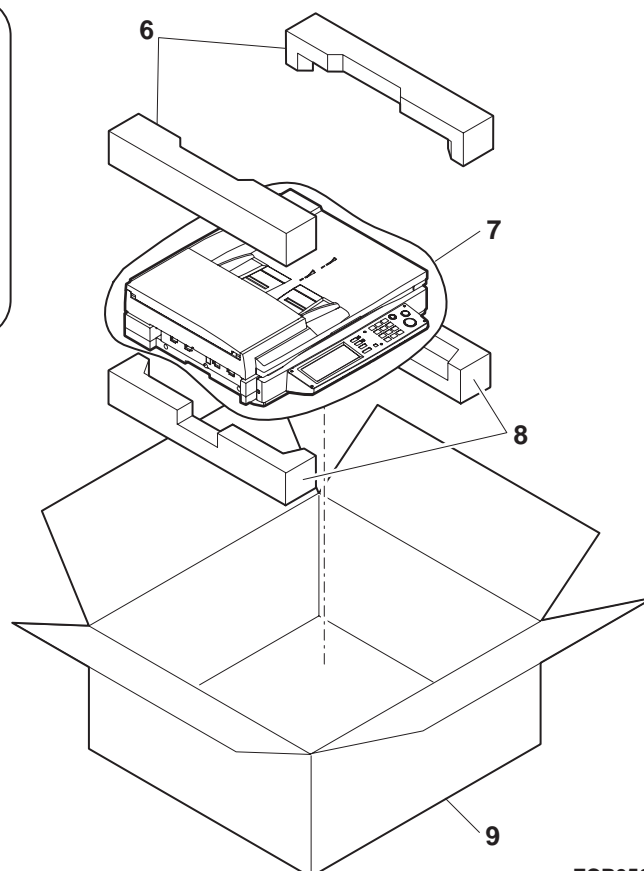
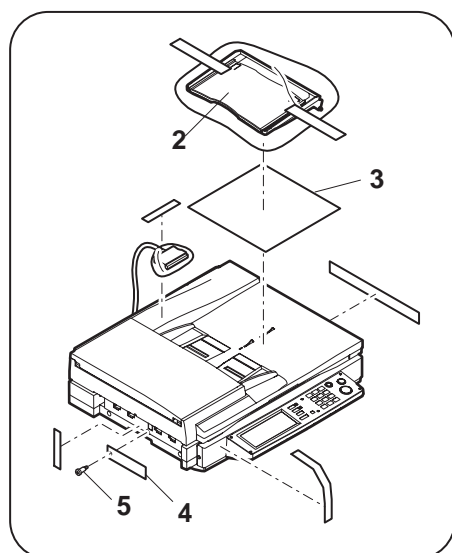
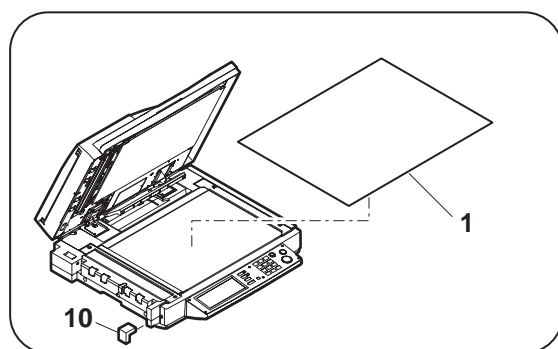


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37 Packing Material & Accessories[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	SPAKA6075DSZZ	AA	N	D	RSPF protect sheet 1
2	LSOU-0177FCGZ	AP		D	Delivery tray T
	LSOU-0179FCZZ	AR		D	Delivery tray 1
3	SPAKA0307QSZZ	AD		D	Protect sheet FN5
4	TCADZ1178FCZZ	AB		D	Screw caution card
5	LX-BZ0787FCZZ	AH		C	Screw for 2/3 mirror lock
6	SPAKA6132FCZZ	AT	N	D	Packing add upper EF1
7	SSAKZ0003QSZZ	AF		D	Body vinyl bag
8	SPAKA6133FCZZ	AU	N	D	Packing add botom EF1
9	SPAKC6131DSZZ	AF	N	D	Packing case (Japan)
	SPAKC6131DS11	AF	N	D	Packing case (Except Japan)
10	SPAKA6265FCZZ	AC	N	D	Fusing protect add

37 Packing Material & Accessories[AR-EF1]



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38 MFP OPE PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM1171FCZZ	AE	N	C	Connector (6pin) [CN2]
2	QCNCW1134FCZZ	AH		C	Connector (24pin) [CN1]
3	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102) [PRK,FAK,COK,JOK,CUK,1K,2K]
	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102) [3K,4K,5K,6K,7K,8K,9K]
	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102) [*K,K,#K,CLK,CAK,PSW]
4	RALMB1002LCZZ	AE		B	Alarm (PKM13EPY-4000-TF01) [BZ1]
5	RC-KZ0008QCZZ	AB	N	C	Capacitor (UP050F ZABZ) [C6]
6	RCRS-0007FCZZ	AD		B	Crystal (CSB480EB) [X1]
7	RH-DZ0016FCZZ	AB		B	Diode (MA700) [D1]
8	VCEAJU1CW476M	AB		C	Capacitor (16WV 47μF) [C1]
9	VCKYPU1EB223Z	AB		C	Capacitor (25WV 0.022μF) [C2,3]
10	VCKYPU1HB101K	AA		C	Capacitor (50WV 100PF) [C4,5]
11	VHD1SS133/-1	AA		B	Diode (1SS133) [D2,3]
12	VHIS1340AF+-1	AH		B	IC (S1340AF) [IC1]
13	VHP1LHLE-002A	AC		B	LED(Green) (LTL-1LHLE-002A) [PRT,FAX,COPY,JOB,PONL]
	VHP1LHLE-002A	AC		B	LED(Green) (LTL-1LHLE-002A) [PDATA,FCM,FDATA]
14	VHPLT9400E/-1	AK		B	LED (LT9400E) [RPL]
15	VRD-HT2EY101J	AA		C	Resistor (1/4W 100Ω ±5%) [R1]
16	VRD-HT2EY102J	AA		C	Resistor (1/4W 1.0KΩ ±5%) [R8]
17	VRD-HT2EY302J	AA		C	Resistor (1/4W 3.0KΩ ±5%) [R2]
18	VRD-HT2EY331J	AA		C	Resistor (1/4W 330Ω ±5%) [R3]
19	VRD-HT2EY471J	AA		C	Resistor (1/4W 470Ω ±5%) [R4,5,6,7]
20	VS2SC1740SR-1	AB		B	Transistor (2SC1740SR) [Q2]
21	VSDTC114YS/-1	AB		B	Transistor (DTC114YS) [Q1]
	(Unit)				
901	CPWBF1469FCE1	BN	N	E	MFP OPE PWB

39 Scanner control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM0828FCZZ	AE		C	Connector (26pin) [CN13]
2	QCNCM0829FCZZ	AG		C	Connector (28pin) [CN12]
3	QCNCM1166FCZZ	AK	N	C	Connector (20pin) [CN18]
4	QCNCM1167FCZZ	AP	N	C	Connector (50pin) [CN19]
5	QCNCM7014SC1C	AC		C	Connector (13pin) [CN5]
6	QCNCM7022SC0C	AB		C	Connector (3pin) [CN10]
7	QCNCM7022SC0E	AB		C	Connector (5pin) [CN6]
8	QCNCM7022SC0F	AB		C	Connector (6pin) [CN7]
9	QCNCW0885FCZZ	AG		C	Connector (12pin) [CN14]
10	QCNCW7040XC8J	AP		C	Connector (80pin) [CN16]
11	QSOCZ0002QSZZ	AD		C	IC socket (8pin) [IC13]
12	QSOCZ0071FCZZ	AP		C	Socket (72pin) [SOCKET1]
13	QSOCZ6428ACZZ	AE		C	IC socket (28pin) [IC14]
14	RCRMZ6007RCZZ	AD		B	Resonator (4.19MHz) [X1]
15	RCRSZ0001QSZZ	AG		B	Crystal (19.6608MHz) [X2]
16	RFLN0049FCZZ	AE	N	C	Filter [NF5,NF6,NF7,NF8,NF9,NF10]
17	RFLN6012RCZZ	AB		C	EMI filter [NF1,NF4]
18	RFLZ1005LCZZ	AB		C	EMI filter [NF3]
19	RH-iX2196SCZZ	AG		B	Regulator [IC5]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR9,BR3,BR4,BR7,BR8,BR10]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR12,BR11,BR6,BR13,BR14,BR15]
20	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR16,BR17,BR18,BR20,BR21,BR22]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR23,BR24,BR25,BR26,BR27,BR28]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4) [BR29,BR30,BR5,BR19,BR1]
21	VCCCCZ1HH220J	AA		C	Capacitor (50WV 22pF) [C58,C60]
22	VCEAGA1AW476M	AA		C	Capacitor (10WV 47μF) [C46,C36]
23	VCEAGA1AW477M	AB		C	Capacitor (10WV 470μF) [C20,C24]
24	VCEAGA1CW477M	AB		C	Capacitor (16WV 470μF) [C10]
25	VCEAGA1HW224M	AA		C	Capacitor (50WV 0.22μF) [C73,C74]
26	VCEAGA1VW476M	AB		C	Capacitor (35WV 47μF) [C63]
27	VCEAZU1VW477M	AD		C	Capacitor (35WV 470μF) [C16]
28	VCKYCZ1CB103K	AA		C	Capacitor (16WV 0.010μF) [C76,C77,C78,C80]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022μF) [C1,C11,C13,C14,C22,C23]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022μF) [C26,C19,C12,C37,C40,C41]
29	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022μF) [C42,C47,C48,C49,C51,C57]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022μF) [C59,C61,C65,C66,C67,C68]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022μF) [C69,C71,C72,C21,C35,C50,C82]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C2,C3,C4,C5,C6,C7]
30	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C8,C9,C25,C27,C28,C29]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C30,C31,C32,C33,C34,C39]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C43,C44,C53,C64,C75,C79,C84]
31	VCKYCZ1HB222K	AA		C	Capacitor (50WV 2200pF) [C45,C54,C55,C62]
32	VCKYCZ1HF103Z	AA		C	Capacitor (50WV 0.01μF) [C15,C18,C70,C81,C83]
33	VCQYNA1HM103K	AA		C	Capacitor (50WV 0.01μF) [C56]
34	VHDDAN202K/-1	AB		B	Diode (DAN202K) [D1,D3,D4,D18,D19,D20]
	VHDDAN202K/-1	AB		B	Diode (DAN202K) [D22,D23,D15,D14]

39 Scanner control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
35	VHDDAP202K/-1	AB		B	Diode (DAP202K) [D5,D16,D17,D24,D25,D26]
	VHDDAP202K/-1	AB		B	Diode (DAP202K) [D13,D12]
36	VHDDSM1D1/-1	AB		B	Diode (DSM1D1) [D21,D6]
37	VHDM1FL20U+-1	AC	N	B	Diode (M1FL20U) [D8,D9,D10,D11]
38	VHDM704A/-1	AC		B	Diode (MA704A) [D2]
39	VHEH2S3B3/-1	AB		B	Zener diode (HZS3B3) [D7]
40	VHi74VHC04M-1	AE	N	B	IC (74VHC04M) [IC8,IC18]
41	VHi74VHC32M-1	AD	N	B	IC (74VHC32M) [IC6]
42	VHi90LV17AW-1	AP		B	IC (90LV17AW) [IC21]
43	VHiD65943GJ-1	AY	N	B	IC (D65943GJ) [IC7]
44	VHiEES04L400P	AG		B	IC (EES04L400P) [IC13]
45	VHiH8S2322R-1	AZ		B	IC (H8S2322R) [IC11]
46	VHiHN58V65A-1	AW		B	IC (HN58V65A) [IC14]
47	VHiLM324D+-1	AE		B	IC (LM324D) [IC1]
48	VHiLM339D+-1	AE		B	IC (LM339D) [IC10]
49	VHiLV25612J-1	AQ		B	IC (LV25612J) [IC19]
50	VHiMTD1361F-1	AR		B	IC (MTD1361F) [IC9]
51	VHiTD62003AP1	AG		B	IC (TD62003AP1) [IC4,IC15,IC20]
52	VHiTD62503F/-	AG		B	IC (TD62503F) [IC12,IC17]
53	VHiVHC244SJ-1	AG	N	B	IC (VHC244SJ) [IC2,IC3]
54	VRD-HT2EY163J	AA		C	Resistor (1/4W 16KΩ ±5%) [R8,R9]
55	VRD-HT2EY911J	AA		C	Resistor (1/4W 910Ω ±5%) [R10]
56	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%) [R37]
57	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%) [R39]
58	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%) [R7,R21,R47,R56]
59	VRS-CZ1JD103F	AA		C	Resistor (1/16W 10KΩ ±1%) [R46,R1]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%) [R5,R31,R29,R3,R6,R22]
60	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%) [R24,R25,R30,R41,R4,R55]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%) [R28,R69]
61	VRS-CZ1JD122J	AA		C	Resistor (1/16W 1.2KΩ ±5%) [R16,R13,R19,R33,R52,R53]
62	VRS-CZ1JD151J	AA		C	Resistor (1/16W 150Ω ±5%) [R27]
63	VRS-CZ1JD203J	AA		C	Resistor (1/16W 20KΩ ±5%) [R48,R59,R62,R65]
	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%) [R12,R14,R15,R17,R18,R32]
64	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%) [R54,R11]
65	VRS-CZ1JD303F	AA		C	Resistor (1/16W 30KΩ ±1%) [R2]
66	VRS-CZ1JD303J	AA	N	C	Resistor (1/16W 30KΩ ±5%) [R51]
67	VRS-CZ1JD561J	AA		C	Resistor (1/16W 560Ω ±5%) [R35]
68	VRS-CZ1JD562J	AA		C	Resistor (1/16W 5.6KΩ ±5%) [R57,R58,R60,R61,R63,R64]
69	VRS-CZ1JD621J	AA		C	Resistor (1/16W 620Ω ±5%) [R34]
70	VRS-CZ1JD624J	AA	N	C	Resistor (1/16W 620KΩ ±5%) [R23]
71	VRS-CZ1JD681J	AA		C	Resistor (1/16W 680Ω ±5%) [R68]
72	VRS-CZ1JD752J	AA		C	Resistor (1/16W 7.5KΩ ±5%) [R26,R43,R44]
73	VRS-CZ1JD911J	AA	N	C	Resistor (1/16W 910Ω ±5%) [R38,R36]
74	VRS-RE3DA1R0J	AB		C	Resistor (2W 1.0Ω ±5%) [R20,R42]
75	VS2SB1197/-1	AC		B	Transistor (2SB1197) [Q8,Q9,Q10]
76	VS2SK3065+-1	AG	N	B	Transistor (2SK3065) [Q11]
77	VSDTA114YK/-1	AC		B	Transistor (DTA114YK) [Q2,Q3,Q6]
78	VSDTC114YK/-1	AC		B	Transistor (DTC114YK) [Q4,Q5,Q7]
79	VSUPA502T/-1	AD		B	Transistor (UPA502T) [Q1]
	(Unit)				
901	CPWBN1450FCE1	BF	N	E	Scanner control PWB

40 CIS Control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM0880FCZZ	AF		C	Connector (26pin) [CN100]
2	QCNCM0923FC12	AE		C	Connector (12pin) [CN1]
3	QCNCW1160FCZZ	AD	N	C	Connector (FFC9604S35F) [CN2]
4	RFiLN6012RCZZ	AB		C	EMI filter (E103) [NF2,11]
5	RFiLZ1005LCZZ	AB		C	EMI filter (EXC-EMT103DT) [NF100,4,10,12,13]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF) [C4,5,8,9,10,11,22]
6	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF) [C23,24,25,31,32,33,34]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF) [C40,48,49,51,52,53,60,61,62]
7	VCEAYU1EC476M	AC	N	C	Capacitor (25WV 47μF) [C3,15,26,28,41,54]
8	VCEAYU1VC476M	AC	N	C	Capacitor (25WV 47μF) [C18]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF) [C100,1,2,7,12,13,17,27]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF) [C29,30,35,36,37,42,43]
9	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF) [C45,46,50,55,58,63,64]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF) [C65,66]
10	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF) [C16,20,21,57,59]
11	VCKYCZ1HF103Z	AA		C	Capacitor (0.01μF/50V) [C6,14,19,38,39,44,56]
12	VHi74VHC04M-1	AE	N	B	IC (74VHC04M) [IC4]
13	VHi74VHCT240X	AF		B	IC (74VHCT240X) [IC100]
14	VHi7SZ125M5-1	AE	N	B	IC (7SZ125M5) [IC2]
15	VHi90LV27AW-1	AQ	N	B	IC (90LV27AW) [IC5]
16	VHiD82825GM-1	BK	N	B	IC (D82825GM) [IC1]

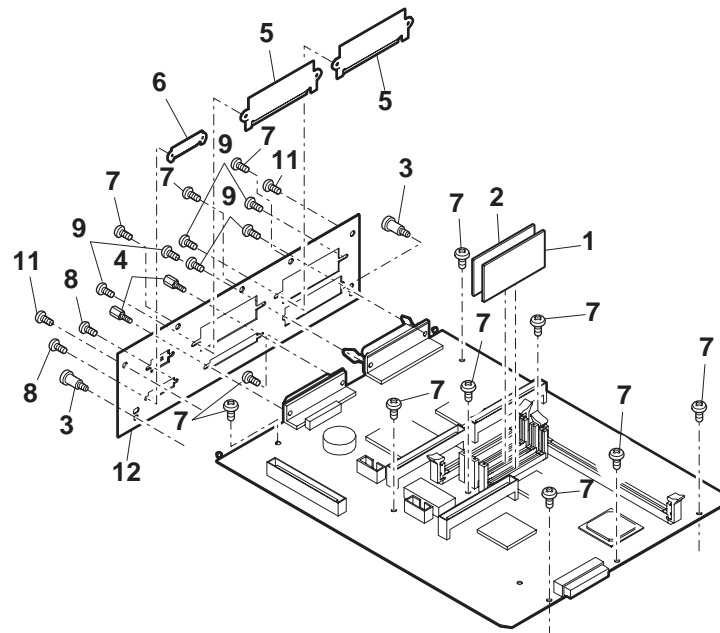
40 CIS Control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
17	VH i F S 7 8 1 B Z B - 1	AP		B	IC (FS781BZB) [IC6]
18	VH i M 3 0 6 4 A T C - 1	AX	N	B	IC (M3064ATC) [IC7]
19	VH i V H C 2 4 4 S J - 1	AG	N	B	IC (VHC244SJ) [IC3]
20	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%) [R5,15,18,19,20,21,34]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%) [R35,43,44,45,46,48,49]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%) [R50,51,52,53,54,55,59]
21	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%) [R1,2,3,4,9,10,14,22]
	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%) [R23,24,25,37,38,39,40]
	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%) [R41,47,56,57]
22	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%) [R100,17,26,27,28,29,30]
	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%) [R31,32,33,36,42]
23	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%) [R6,7,8,11,12,13]
24	VRS-CZ1JD332F	AA		C	Resistor (1/16W 3.3KΩ ±1%) [R58]
(Unit)					
901	CPWBN1458FCE1	BF	N	E	CIS control PWB

41 MFP Controller PWB[AR-M11]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	VH i 2 8 F 3 2 2 L 0 1 F	BE	N	B	MFP flash ROM A J (28F322L01F) [Japan]
	VH i 2 8 F 3 2 2 L 0 3 F	BF	N	B	MFP flash ROM A EX (28F322L03F) [except Japan]
2	VH i 2 8 F 3 2 2 L 0 2 F	BF	N	B	MFP flash ROM B J (28F322L02F) [Japan]
	VH i 2 8 F 3 2 2 L 0 4 F	BL	N	B	MFP flash ROM B EX (28F322L04F) [except Japan]
3	LX-BZ0828FCZZ	AD		C	Handle fixing screw
4	LX-BZ0921FCZ1	AE	N	C	Scanner Screw
5	PCÖVP1557FCZZ	AC		C	LAN/option cover
6	PCÖVP1560FCZZ	AC	N	C	FAX I/F cover
7	XBBSD30P06000	AA		C	Screw (3×6)
8	XBPSD26P06000	AA		C	Screw (2.6×6)
9	XBPSD30P06000	AA		C	Screw (3×6)
11	XHBSE30P06000	AA		C	Screw (3×6)
12	LPLTM5765FCZ1	AH	N	C	Control joint plate

41 MFP Controller PWB[AR-M11]

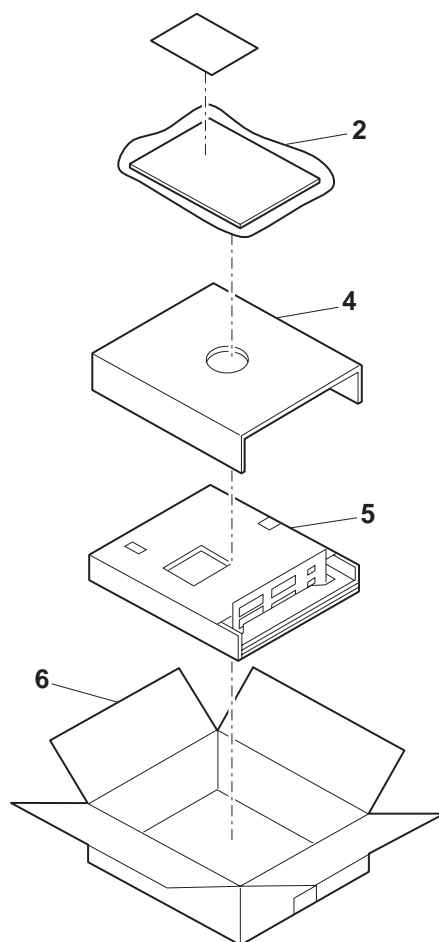


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42 Packing material & Accessories[ARM11]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
2	SPAKP2792RCZZ	AE		D	Vinyl bag (460x500mm)
4	SPAKA6144FCZZ	AH	N	D	Packing add B
5	SPAKA6143FCZZ	AN	N	D	Packing add A
6	SPAKC6142FCZZ	AP	N	D	Packing case [Japan]
	SPAKC6142FC11	AP	N	D	Packing case [USA]
	SPAKC6142FC12	AP	N	D	Packing case [Europe]
	SPAKC6142FC13	AP	N	D	Packing case [Other countries]

42 Packing material & Accessories[ARM11]

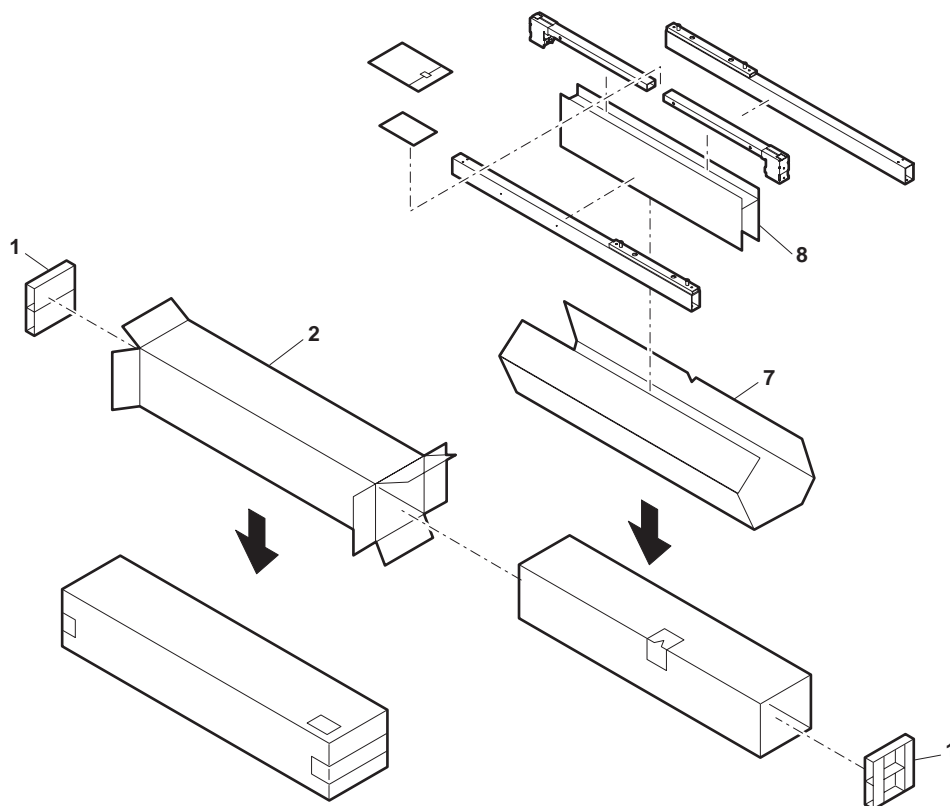


FCP05058

43 Packing Material & Accessories[AR-RK1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	SPAKA6136FCZZ	AE	N	D	Protect add
2	SPAKC6134DSZZ	AT	N	D	Packing case (Japan)
	SPAKC6134DS11	AT	N	D	Packing case (U.S.A Other countries)
	SPAKC6134DS12	AT	N	D	Packing case (Europe,U.Kngdom,Australia,New Zealand)
	SPAKC6134DS13	AT	N	D	Packing case (China)
7	SPAKA6135FCZZ	AK	N	D	Sleeve
8	SPAKA6137FCZZ	AK	N	D	Spacer

43 Packing Material & Accessories[AR-RK1]



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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【C】					
CARMP0147DS51	28-501	BA	N	E	
CBTN-0250FC01	29- 18	AH	N	E	
CBTN-0251FC01	29- 15	AF	N	E	
CBTN-0252FC01	29- 13	AP	N	E	
CBTN-0253FC01	29- 12	AN	N	E	
CCÖVP1541FC02	31- 5	AT	N	D	
CDAIU0619DS51	31- 1	BF	N	E	
“	32-901	BF	N	E	
CFILW0282FC01	29- 16	AF	N	D	
CFILW0283FC01	29- 17	AF	N	D	
CFILW0284FC01	29- 14	AF	N	D	
CGLSP0003RS51	27- 10	BC	N	B	
CGLSP0003RS52	27- 10	BF	N	B	
CGLSP0102DS51	27- 13	BF	N	B	
CHLDZ1446FC31	31-501	BC	N	E	
CiNSR2085FC51	17- 20	AS	N	D	
CiNSR2127FC51	17- 20	AR	N	D	
CiNSZ2086FC51	17- 20	AS	N	D	
CiNSZ2128FC51	17- 20	AR	N	D	
CPLTM0031RS51	31- 41	BS	N	E	
CPLTM5719FC01	31- 31	AG	N	C	
CPLTM5746FC01	35- 7	AE	N	C	
CPLTM5882FC02	34- 47	AN	N	C	
CPNLC0244DS51	27- 26	CV	N	D	
CPNLC0244DS52	27- 26	CT	N	D	
CPNLC0245FC01	29- 20	AY	N	D	
CPNLC0245FC02	29- 20	AY	N	D	
CPNLH0020QS12	1- 26	AK	N	D	
CPNLH0020QS13	1- 26	AK	N	D	
CPNLH0020QS22	1- 26	AK	N	D	
CPNLH0020QS23	1- 26	AK	N	D	
CPWBF1449FC31	32- 9	BH	N	E	
CPWBF1453FCE1	28- 9	BN	N	E	
CPWBF1454FCE1	31- 45	BN	N	E	
CPWBF1459DS51	33- 26	BN	N	E	
CPWBF1469FCE1	29- 11	BN	N	E	
“	38-901	BN	N	E	
CPWBF1470DS51	29- 4	BN	N	E	
CPWBF1501DS51	33- 16	BN	N	E	
CPWBN1450FCE1	30- 13	BF	N	E	
“	39-901	BF	N	E	
CPWBN1451DS51	30- 18	BF	N	E	
CPWBN1458FCE1	36- 1	BF	N	E	
“	40-901	BF	N	E	
CPWBN1471FCE1	29- 1	BF	N	E	
CSFTZ2586FC31	31-502	AZ	N	E	
【D】					
DHAi-3150FCZZ	31- 40	AD	N	C	
DHAi-3152FCZZ	30- 19	AF	N	C	
DHAi-3153FCZZ	30- 38	AC	N	C	
DHAi-3161FCZZ	33- 29	AK	N	C	
DHAi-3162FCZZ	35- 13	AK	N	C	
DHAi-3166FCZZ	33- 27	AY	N	C	
DHAi-3191FCZZ	29- 6	AF	N	C	
DHAi-3192FCZZ	29- 5	AD	N	C	
DHAi-3193FCZZ	29- 22	AC	N	C	
DHAi-3281FCZZ	34- 62	AH	N	C	
DHAi-3303FCZZ	30- 28	BC	N	C	
DHAi-3336FCZZ	34- 79	AB	N	C	
DUNT-7079FCZZ	36- 4	CC	N	E	
DUNT-7132DSZZ	27- 8	CY	N	E	
DUNT-7133DSZZ	27- 8	CZ	N	E	
【G】					
GCAB-0940FCZZ	1- 5	BA	N	D	
GCAB-0942FCZZ	27- 5	AP	N	D	
“	28- 12	AP	N	D	
GCAB-0943FCZZ	27- 1	AK	N	D	
GCAB-0945FCZZ	27- 7	AR	N	D	
【H】					
HPNLC0243FCZ1	1- 11	AP	N	D	
HPNLC0244FCZZ	29- 19	AZ	N	D	
HPNLH0246FCZZ	29- 10	BF	N	D	
【J】					
JKNBZ0141FCZZ	34- 56	AH	N	C	
【L】					
LBNDJ0043FCZZ	30- 37	AA		C	
LBSHC0161FCZZ	31- 4	AB		C	
LBSHZ1102CCZZ	28- 3	AC		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
LDAIU0610FCZZ	30- 30	AE		D	
LDAIU0619FCZZ	32- 5	AT	N	C	
LDAIU0627FCZZ	27- 27	AZ	N	D	
LFiX-0284FCZZ	31- 12	AC		C	
LFiX-0537FCZZ	30- 39	AD		C	
LFiX-0543FCZZ	27- 12	AG	N	D	
LFiX-0544FCZZ	27- 9	AG	N	D	
LFiX-0545FCZZ	32- 12	AC	N	C	
LFiX-0568FCZZ	33- 12	AC	N	C	
LFiX-0569FCZZ	30- 46	AD	N	C	
LFRM-1022FCZZ	34- 36	AK	N	D	
LHLDW0429FCZZ	34- 52	AB		C	
LHLDW0595FCZZ	30- 35	AC		C	
LHLDW1007LCZZ	30- 34	AD		C	
LHLDW1009ACZZ	34- 40	AA		C	
“	34- 60	AA		C	
LHLDW1115FCZZ	30- 3	AD		C	
“	30- 14	AD		C	
LHLDW1201CCZZ	30- 45	AA		C	
LHLDW1264FCZZ	30- 36	AD		C	
LHLDW2101SCZZ	34- 59	AB		C	
LHLDZ1085FCZZ	28- 8	AD	N	C	
LHLDZ1381FCZZ	31- 44	AL		C	
LHLDZ1458FCZZ	29- 9	AF	N	C	
LHLDZ1459FCZZ	29- 7	AE	N	C	
LHLDZ1483FCZZ	34- 13	AF		C	
LHLDZ1484FCZZ	34- 67	AC	N	C	
LHLDZ1485FCZZ	34- 32	AC	N	C	
LHLDZ1486FCZZ	34- 45	AC	N	C	
LHLDZ1505FCZZ	31- 2	AC	N	C	
LPiNS0014QSGZ	29- 21	AC	N	C	
LPiNS1031HCZZ	34- 48	AA		C	
LPLTM2573FCZ1	33- 43	AD		C	
LPLTM5720FCZZ	30- 20	AK	N	C	
LPLTM5723FCZZ	30- 10	AG	N	C	
LPLTM5765FCZ1	12- 35	AH	N	C	
“	41- 12	AH	N	C	
LPLTM5785FCZZ	34- 53	AC	N	C	
LPLTM5877FCZZ	30- 24	AE	N	C	
LPLTM5884FCZZ	34- 51	AW	N	C	
LPLTM5887FCZZ	33- 10	AL	N	C	
LPLTM5889FCZZ	34- 57	AC	N	C	
LPLTM5891FCZZ	35- 1	AE	N	C	
LPLTM5927FCZZ	30- 22	AF	N	C	
LPLTM5928FCZZ	34- 23	AG	N	C	
LPLTM5929FCZZ	34- 61	AR	N	C	
LPLTM5930FCZZ	35- 5	AD	N	C	
LPLTM5932FCZZ	35- 24	AC		C	
LPLTP5743FCZZ	33- 17	AF		C	
LPLTP5747FCZZ	35- 8	AC	N	C	
LPLTP5748FCZZ	35- 32	AD	N	C	
LPLTP5777FCZZ	33- 38	AG	N	D	
LPLTP5778FCZZ	33- 37	AG	N	D	
LPLTP5938FCZZ	33- 44	AC	N	C	
LPLTP5960FCZZ	30- 44	AE	N	C	
LRALM0183FCZZ	30- 31	AG	N	C	
LRALM0184FCZZ	30- 41	AG	N	C	
LSÖU-0177FCGZ	37- 2	AP		D	
LSÖU-0179FCZZ	37- 2	AR		D	
LSTPP0314FCZZ	35- 21	AA		C	
LSTPP0353FCZZ	35- 3	AE	N	C	
LSTPP0359FCZZ	34- 65	AE	N	C	
LSTYM0261FCZZ	32- 11	AB	N	C	
LSTYM0288FCZZ	34- 31	AK	N	C	
LX-BZ0004QSZZ	30- 42	AB		C	
LX-BZ0049FCZZ	31- 19	AB		C	
LX-BZ0324FCZZ	31- 22	AA		C	
LX-BZ0465FCZZ	27- 24	AA		C	
LX-BZ0680FCZZ	36- 5	AB		C	
LX-BZ0776FCZZ	27- 6	AG		C	
LX-BZ0787FCZZ	37- 5	AH		C	
LX-BZ0828FCZZ	12- 56	AD		C	
“	41- 3	AD		C	
LX-BZ0842FCZZ	27- 4	AG		C	
LX-BZ0921FCZ1	12- 25	AE	N	C	
“	41- 4	AE	N	C	
LX-BZ0931FCZZ	34- 76	AC	N	C	
LX-WZ0119FCZZ	31- 35	AA		C	
【M】					
MARMP0147FCZZ	28- 10	AK	N	C	
MARMP0148FCZZ	28- 1	AK	N	C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
MARMP0243FCZZ	33- 41	AD		C	
MARMP0248FCZZ	35- 15	AE		C	
MARMP0284FCZZ	34- 26	AC	N	C	
MHNG-0208FCZZ	33- 7	BA	N	C	
MHNG-0209FCZZ	34- 34	BC	N	C	
MLEVP0794FCZZ	33- 34	AC	N	C	
MLEVP0796FCZZ	35- 14	AC	N	C	
MLEVP0797FCZZ	35- 26	AC	N	C	
MLEVP0804FCZZ	35- 16	AC	N	C	
MLEVP0837FCZZ	34- 70	AC	N	C	
MSLi-0138FCZZ	31- 15	AC		C	
"	32- 8	AC		C	
MSPRC2865FCZ1	27- 21	AB	N	C	
MSPRC3001FCZZ	34- 69	AB	N	C	
MSPRD2870FCZ1	35- 22	AC	N	C	
MSPRD2879FCZZ	35- 27	AB	N	C	
MSPRD3002FCZZ	34- 33	AC	N	C	
MSPRD3020FCZ1	31- 49	AG	N	C	
MSPRP2825FCZZ	32- 14	AC	N	C	
MSPRP2830FCZZ	33- 19	AA		C	
MSPRP2832FCZZ	35- 17	AC	N	C	
MSPRP2878FCZZ	34- 8	AC	N	C	
MSPRP3009FCZZ	29- 2	AD	N	C	
MSPRP3011FCZZ	34- 39	AC	N	C	
MSPRT1563FCZZ	28- 7	AC		C	
MSPRT2846FCZZ	31- 30	AC	N	C	
MSPRT2863FCZZ	35- 31	AB	N	C	
MSPRT2864FCZZ	35- 9	AC	N	C	
【N】					
NBLTH0329FCZZ	31- 18	AG	N	B	
NBLTH0363FCZZ	34- 18	AG	N	B	
NBLTH0364FCZZ	34- 44	AG	N	B	
NBRGC0133FCZ1	31- 42	AC		C	
NBRGC0136FCZZ	34- 12	AC		C	
NBRGM0096FCZ1	34- 17	AB		C	
NGERH0027QSZZ	31- 33	AH		C	
NGERH1476FCZZ	34- 42	AD	N	C	
NGERH1477FCZZ	34- 37	AC	N	C	
NGERH1478FCZZ	34- 43	AE	N	C	
NGERP1385FCZZ	33- 22	AF		C	
NGERR1386FCZZ	33- 21	AE		C	
NPLYZ0005QSZZ	31- 24	AG		C	
NPLYZ0006QSZZ	31- 26	AD		C	
NPLYZ0013QSZZ	31- 23	AL		C	
NPLYZ0338FCZZ	31- 20	AN		C	
NPLYZ0375FCZZ	34- 46	AC		C	
NPLYZ0397FCZZ	34- 20	AK		C	
NPLYZ0398FCZZ	34- 16	AC		C	
NPLYZ0399FCZZ	31- 9	AG	N	C	
NRÖLP0011QSZZ	27- 18	AD		C	
NRÖLP1364FCZZ	34- 28	AC		C	
NRÖLR1312FCZZ	34- 19	AN		C	
NRÖLR1317FCZZ	34- 21	AP		C	
NRÖLR1318FCZZ	34- 30	AR	N	C	
NRÖLR1320FCZZ	34- 50	AQ	N	C	
NSFTZ1805FCZZ	28- 5	AE		C	
NSFTZ2586FCZZ	31- 25	AS	N	C	
NSFTZ2599FCZ1	34- 10	AW	N	C	
NSFTZ2600FCZZ	34- 7	AM	N	C	
NSFTZ2601FCZZ	27- 20	AH	N	C	
NSFTZ2659FCZZ	35- 23	AR	N	C	
NSFTZ2678FCZZ	34- 15	AL	N	C	
【P】					
PBRSS0209FCZZ	34- 77	AG	N	B	
PCAPH0010GCZZ	26- 1	AD		D	
PCLC-0302FCZZ	34- 22	AT	N	B	
PCLC-0303FCZZ	34- 14	AT	N	B	
PCLR-0426FCZZ	34- 49	AD		C	
PCLR-0471FCZZ	34- 6	AG	N	C	
PCÖVP1468FCZZ	26- 2	AD		D	
PCÖVP1518FCZZ	33- 9	AE		D	
PCÖVP1549FCZZ	33- 39	AU	N	D	
PCÖVP1557FCZZ	12- 38	AC		C	
"	41- 5	AC		C	
PCÖVP1560FCZZ	12- 37	AC	N	C	
"	41- 6	AC	N	C	
PCÖVP1566FCZZ	27- 3	AS	N	D	
PCÖVP1593FCZZ	36- 3	AF	N	D	
PCÖVP1594FCZZ	34- 1	AG	N	D	
PCÖVP1595FCZZ	33- 3	AG	N	D	
PCÖVP1598FCZZ	30- 26	AL	N	D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
PCÖVP1599FCZZ	30- 1	AG	N	D	
PCÖVP1600FCZZ	30- 6	AF	N	D	
PCÖVP1615FCZZ	33- 5	AE	N	D	
PCÖVP1624FCZZ	27- 23	AC	N	D	
PCÖVP1644FCZZ	33- 14	AD	N	C	
PCÖVP1645FCZZ	33- 24	AH	N	C	
PCUSF0334FCZZ	32- 10	AP		C	
PCUSS0372FCZZ	34- 64	AD	N	C	
PCUSS0373FCZZ	34- 72	AB	N	C	
PCUSU0203FCZZ	31- 7	AE		C	
"	32- 6	AE		C	
PGiDH1897FCZZ	34- 74	AT	N	C	
PGiDM1890FCZZ	31- 8	AC	N	C	
PGiDM1899FCZZ	35- 30	AY	N	C	
PGiDM1900FCZZ	27- 16	AR	N	C	
PGiDM1901FCZZ	27- 17	AQ	N	C	
PGiDM1953FCZZ	34- 4	AS	N	C	
PGiDM1964FCZZ	31- 50	AC	N	C	
PGLSP0103FCZZ	34- 75	AV	N	C	
PGUMS0002QSZZ	31- 32	AL		C	
PGUMS0283FCZ1	30- 29	AA	N	C	
PGUMS0296FCZZ	33- 20	AD	N	C	
PGUMS0298FCZZ	33- 15	AC	N	C	
PGUMS0299FCZZ	33- 25	AH	N	C	
PMAGT0072FCZZ	35- 11	AF		C	
PMiR-0164FCZZ	32- 13	AP	N	B	
PMiR-0165FCZZ	31- 13	AP	N	B	
PMLT-1256FCZZ	27- 29	AC	N	C	
PMLT-1257FCZZ	27- 30	AB	N	C	
PMLT-1270FCZZ	34- 55	AB	N	C	
PMLT-1271FCZZ	35- 28	AB	N	C	
PMLT-1272FCZZ	34- 3	AB	N	C	
"	35- 2	AB	N	C	
PMLT-1282FCZZ	30- 47	AE	N	C	
PMLT-1284FCZZ	36- 8	AE	N	C	
PMLT-1286FCZZ	33- 2	AD	N	C	
PREFL0172FCZZ	32- 3	AK		B	
PRNGP0090FCZZ	33- 42	AA		C	
PSHEP4846FCZZ	34- 58	AD	N	C	
PSHEP4848FCZZ	35- 20	AB	N	C	
PSHEP4915FCZZ	34- 5	AE	N	C	
PSHEP4916FCZ1	34- 73	AF	N	C	
PSHEP4927FC10	17- 13	AR	N	D	
PSHEP4927FC11	17- 13	AR	N	D	
PSHEP4927FCZ1	17- 13	AR	N	D	
PSHEP4927FCZ2	17- 13	AM	N	D	
PSHEP4927FCZ3	17- 13	AR	N	D	
PSHEP4927FCZ4	17- 13	AR	N	D	
PSHEP4927FCZ5	17- 13	AR	N	D	
PSHEP4927FCZ6	17- 13	AR	N	D	
PSHEP4927FCZ7	17- 13	AR	N	D	
PSHEP4927FCZ8	17- 13	AR	N	D	
PSHEP4927FCZ9	17- 13	AR	N	D	
PSHEP4927FCZZ	17- 13	AM	N	D	
PSHEP4932FCZZ	30- 7	AD	N	C	
PSHEP4937FCZZ	35- 29	AB	N	C	
PSHEZ4836FCZZ	30- 43	AB	N	C	
PSHEZ4841FCZ1	30- 40	AD	N	C	
PSHEZ4842FCZZ	30- 27	AD	N	C	
PSHEZ4843FCZZ	30- 32	AC	N	C	
PSHEZ4845FCZZ	33- 1	AV	N	C	
PSHEZ4847FCZZ	35- 19	AL	N	C	
PSHEZ4878FCZZ	35- 18	AC	N	C	
PSHEZ4906FCZZ	29- 24	AC	N	C	
PSHEZ4949FCZZ	34- 38	AE	N	C	
PSHEZ4957FCZZ	34- 78	AC	N	C	
PSLDH0178FCZZ	28- 4	AD		C	
PSPO-0001QSZZ	27- 19	AB		C	
PTPE-0265FCZZ	33- 13	AC	N	C	
PWiR-0191FCZZ	31- 17	AQ	N	B	
PWiR-0192FCZZ	31- 16	AQ	N	B	
【Q】					
QCNCM0041QSZZ	26- 3	AP		C	
QCNCM0828FCZZ	39- 1	AE		C	
QCNCM0829FCZZ	39- 2	AG		C	
QCNCM0880FCZZ	40- 1	AF		C	
QCNCM0923FC12	40- 2	AE		C	
QCNCM1146FCZZ	26- 4	AE	N	C	
QCNCM1148FCZZ	26- 5	AP	N	C	
QCNCM1166FCZZ	39- 3	AK	N	C	
QCNCM1167FCZZ	39- 4	AP	N	C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
QCNCM1171FCZZ	38- 1	AE	N	C	
QCNCM7014SC1C	39- 5	AC		C	
QCNCM7022SC0C	39- 6	AB		C	
QCNCM7022SC0E	39- 7	AB		C	
QCNCM7022SC0F	39- 8	AB		C	
QCNCW0885FCZZ	39- 9	AG		C	
QCNCW0946FCZZ	26- 6	AH		C	
QCNCW1134FCZZ	38- 2	AH		C	
QCNCW1147FCZZ	26- 7	AL	N	C	
QCNCW1149FCZZ	26- 8	AN	N	C	
QCNCW1160FCZZ	40- 3	AD	N	C	
QCNCW7040XC8J	39- 10	AP		C	
QCNW-0165FCZZ	30- 15	AH	N	C	
QCNW-0166FCZZ	29- 25	AE	N	C	
QCNW-0167FCZZ	30- 5	AM	N	C	
QCNW-0168FCZZ	30- 4	AE	N	C	
"	32- 7	AE	N	C	
QCNW-0170FCZZ	36- 6	AH	N	C	
QCNW-0181FCZZ	30- 16	AH	N	C	
QFS-D132CQCZZ	26- 9	AG		A	
QFSHB0028FCZZ	26- 10	AC		C	
QPiN-0003GCZZ	26- 11	AC		C	
QSÖCZ0001QSZZ	26- 12	AL		C	
QSÖCZ0002QSZZ	39- 11	AD		C	
QSÖCZ0071FCZZ	39- 12	AP		C	
QSÖCZ0073FCZZ	26- 13	AL		C	
QSÖCZ0079FCZZ	26- 14	AN		C	
QSÖCZ6428ACZZ	26- 15	AE		C	
"	39- 13	AE		C	
QSW-P0005QSZZ	38- 3	AC		B	
QSW-Z0531FCZZ	34- 63	AL		B	
[R]					
RALMB1002LCZZ	38- 4	AE		B	
RC-KZ0008QCZZ	38- 5	AB	N	C	
RCORF0041FCZZ	27- 31	AH	N	C	
RCRMZ6007RCZZ	39- 14	AD		B	
RCRS-0007FCZZ	38- 6	AD		B	
RCRSP6676RCZZ	26- 16	AG		B	
RCRSZ0001QSZZ	39- 15	AG		B	
RCRUA0005FCZZ	26- 17	AP		B	
RCRUA0007FCZZ	26- 18	AP		B	
RCRUA0008FCZZ	26- 19	AP		B	
RCRUA0009FCZZ	26- 20	AP		B	
RCRUA0012FCZZ	26- 21	AP		B	
RFILN0048FCZZ	26- 22	AC		C	
RFILN0049FCZZ	39- 16	AE	N	C	
RFILN0051FCZZ	26- 23	AC	N	C	
RFILN6012RCZZ	39- 17	AB		C	
"	40- 4	AB		C	
RFILZ1005LCZZ	39- 18	AB		C	
"	40- 5	AB		C	
RH-DZ0016FCZZ	38- 7	AB		B	
RH-iX2196SCZZ	39- 19	AG		B	
RLMPD0658FCZZ	32- 1	BA	N	B	
RMÖTS0857FCZZ	31- 27	AZ	N	B	
RMÖTS0876FCZZ	34- 35	BD	N	B	
RMPTR4100ACZZ	26- 24	AB		B	
RMPTR4103ACZZ	26- 25	AB		B	
"	39- 20	AB		B	
RMPTR4330ACZZ	26- 26	AB		B	
RMPTR4472ACZZ	26- 27	AB		B	
RPLU-0336FCZZ	34- 25	AS	N	B	
RPLU-0347FCZZ	35- 12	AQ	N	B	
[S]					
SPAKA0307QSZZ	37- 3	AD		D	
SPAKA6075DSZZ	37- 1	AA	N	D	
SPAKA6132FCZZ	37- 6	AT	N	D	
SPAKA6133FCZZ	37- 8	AU	N	D	
SPAKA6135FCZZ	43- 7	AK	N	D	
SPAKA6136FCZZ	43- 1	AE	N	D	
SPAKA6137FCZZ	43- 8	AK	N	D	
SPAKA6143FCZZ	42- 5	AN	N	D	
SPAKA6144FCZZ	42- 4	AH	N	D	
SPAKA6265FCZZ	37- 10	AC	N	D	
SPAKC6118DS12	17- 5	AU	N	D	
SPAKC6118DS13	17- 5	AU	N	D	
SPAKC6122DS17	17- 5	AU	N	D	
SPAKC6122DS18	17- 5	AU	N	D	
SPAKC6122DS19	17- 5	AU	N	D	
SPAKC6122DS20	17- 5	AU	N	D	
SPAKC6122DS21	17- 5	AU	N	D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
SPAKC6122DS22	17- 5	AU	N	D	
SPAKC6131DS11	37- 9	AF	N	D	
SPAKC6131DSZZ	37- 9	AF	N	D	
SPAKC6134DS11	43- 2	AT	N	D	
SPAKC6134DS12	43- 2	AT	N	D	
SPAKC6134DS13	43- 2	AT	N	D	
SPAKC6134DSZZ	43- 2	AT	N	D	
SPAKC6142FC11	42- 6	AP	N	D	
SPAKC6142FC12	42- 6	AP	N	D	
SPAKC6142FC13	42- 6	AP	N	D	
SPAKC6142FCZZ	42- 6	AP	N	D	
SPAKP2792RCZZ	42- 2	AE		D	
SSAKZ0003QSZZ	37- 7	AF		D	
[T]					
TCADZ1178FCZZ	37- 4	AB		D	
TiNSD2092GHZZ	17- 20	AS	N	D	
TiNSD2134GHZZ	17- 20	AS	N	D	
TiNSE2077FCZZ	17- 20	AQ	N	D	
TiNSE2078FCZZ	17- 20	AW	N	D	
TiNSE2081GHZZ	17- 20	AS	N	D	
TiNSE2087FCZZ	17- 20	AX	N	D	
TiNSE2119FCZZ	17- 20	AN	N	D	
TiNSE2120FCZZ	17- 20	AV	N	D	
TiNSE2123GHZZ	17- 20	AS	N	D	
TiNSE2129FCZZ	17- 20	AV	N	D	
TiNSE2181FCZZ	17- 20	AT	N	D	
TiNSF2079FCZZ	17- 20	AW	N	D	
TiNSF2121FCZZ	17- 20	AV	N	D	
TiNSG2080GHZZ	17- 20	AS	N	D	
TiNSG2122GHZZ	17- 20	AS	N	D	
TiNSH2084GHZZ	17- 20	AS	N	D	
TiNSH2126GHZZ	17- 20	AS	N	D	
TiNSi2083GHZZ	17- 20	AS	N	D	
TiNSi2125GHZZ	17- 20	AS	N	D	
TiNSJ2076FCZZ	17- 20	AQ	N	D	
TiNSJ2118FCZZ	17- 20	AN	N	D	
TiNSS2082FCZZ	17- 20	AW	N	D	
TiNSS2124FCZZ	17- 20	AV	N	D	
TiNSW2089GHZZ	17- 20	AS	N	D	
TiNSW2131GHZZ	17- 20	AS	N	D	
TiNSZ2090GHZZ	17- 20	AS	N	D	
TiNSZ2091GHZZ	17- 20	AS	N	D	
TiNSZ2093GHZZ	17- 20	AS	N	D	
TiNSZ2094GHZZ	17- 20	AS	N	D	
TiNSZ2095GHZZ	17- 20	AS	N	D	
TiNSZ2132GHZZ	17- 20	AS	N	D	
TiNSZ2133GHZZ	17- 20	AS	N	D	
TiNSZ2135GHZZ	17- 20	AS	N	D	
TiNSZ2136GHZZ	17- 20	AS	N	D	
TiNSZ2137GHZZ	17- 20	AS	N	D	
TLABH4440FCZZ	33- 45	AF		D	
TLABZ4335FCZZ	32- 15	AB		D	
[U]					
UBATi0014FCZZ	26- 28	AN		B	
[V]					
VCCCCZ1HH101J	26- 29	AA		C	
"	40- 6	AA		C	
VCCCCZ1HH220J	26- 30	AA		C	
"	39- 21	AA		C	
VCEAGA1AW476M	39- 22	AA		C	
VCEAGA1AW477M	39- 23	AB		C	
VCEAGA1CW477M	39- 24	AB		C	
VCEAGA1HW224M	39- 25	AA		C	
VCEAGA1VW476M	39- 26	AB		C	
VCEAJU1CW476M	38- 8	AB		C	
VCEAPH1HC105M	26- 31	AC		C	
VCEAPS1AC227M	26- 32	AD		C	
VCEAPS1CC106M	26- 33	AC		C	
VCEAPS1CC226M	26- 34	AC		C	
VCEAPS1CC476M	26- 35	AC		C	
VCEAYU1EC476M	40- 7	AC	N	C	
VCEAYU1VC476M	40- 8	AC	N	C	
VCEAZU1VW477M	39- 27	AD		C	
VCKYCZ1CB103K	39- 28	AA		C	
VCKYCZ1CF104Z	26- 36	AB		C	
"	40- 9	AB		C	
VCKYCZ1EF223Z	39- 29	AA		C	
VCKYCZ1HB102K	26- 37	AA		C	
"	39- 30	AA		C	
"	40- 10	AA		C	
VCKYCZ1HB222K	39- 31	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VCKY CZ1HF103Z	26- 38	AA		C	
"	39- 32	AA		C	
"	40- 11	AA		C	
VCKYPU1EB223Z	38- 9	AB		C	
VCKYPU1HB101K	38- 10	AA		C	
VCQYNA1HM103K	39- 33	AA		C	
VHD1SS133//--1	38- 11	AA		B	
VHDDAN202K/-1	39- 34	AB		B	
VHDDAP202K/-1	39- 35	AB		B	
VHDDAP202U/-1	26- 39	AB		B	
VHDDSM1D1//--1	39- 36	AB		B	
VHDM1FL20U+-1	39- 37	AC	N	B	
VHDMA704A//--1	39- 38	AC		B	
VHDBR451F//--1	26- 40	AD		B	
VHDRLS73///--1	26- 41	AA		B	
VHEH ZS3B3//--1	39- 39	AB		B	
VHi28F081L02C	30- 12	BB	N	B	
VHi28F322L01F	12- 54	BE	N	B	
"	41- 1	BE	N	B	
VHi28F322L02F	12- 55	BF	N	B	
"	41- 2	BF	N	B	
VHi28F322L03F	12- 54	BF	N	B	
"	41- 1	BF	N	B	
VHi28F322L04F	12- 55	BL	N	B	
"	41- 2	BL	N	B	
VHi65946P07-1	26- 42	BA		B	
VHi74LCX08MTC	26- 43	AE		B	
VHi74LCX14MTC	26- 44	AE		B	
VHi74LCX244MT	26- 45	AG		B	
VHi74LCX32MTC	26- 46	AE		B	
VHi74LVX16128	26- 47	AP		B	
VHi74VHC04M-1	39- 40	AE	N	B	
"	40- 12	AE	N	B	
VHi74VHC32M-1	39- 41	AD	N	B	
VHi74VHCT240X	40- 13	AF		B	
VHi7SZ125M5-1	40- 14	AE	N	B	
VHi90LV17AW-1	26- 48	AP		B	
"	39- 42	AP		B	
VHi90LV27AW-1	40- 15	AQ	N	B	
VHiD65943GJ-1	39- 43	AY	N	B	
VHiD82825GM-1	40- 16	BK	N	B	
VHiDS14C238//	26- 49	AT		B	
VHiEEP64-120P	26- 50	AW		B	
VHiEES04L400P	39- 44	AG		B	
VHiFS781BZB-1	40- 17	AP		B	
VHiH8S2322R-1	39- 45	AZ		B	
VHiHG73C095-1	26- 51	AY		B	
VHiHN58V65A-1	39- 46	AW		B	
VHiKS0U1347-1	26- 52	BN		B	
VHiLCX157MT-1	26- 53	AG		B	
VHiLCX16244-1	26- 54	AM		B	
VHiLCX16245-1	26- 55	AM		B	
VHiLCX16373-1	26- 56	AM		B	
VHiLCX74MTC-1	26- 57	AE		B	
VHiLM324D+-1	39- 47	AE		B	
VHiLM339D+-1	39- 48	AE		B	
VHiLM393D+-1	26- 58	AE		B	
VHiLV25612J-1	39- 49	AQ		B	
VHiLVT240MT-1	26- 59	AL		B	
VHiM3064ATC-1	40- 18	AX	N	B	
VHiM87J4810-1	26- 60	BK		B	
VHiMTD1361F-1	39- 50	AR		B	
VHiN2370R04-1	26- 61	AF		B	
VHiN2370R33-1	26- 62	AF		B	
VHiN2391D25-1	26- 63	AG		B	
VHiNJM317DL-1	26- 64	AK		B	
VHiNJU6356E-1	26- 65	AK		B	
VHiPi6C2309-1	26- 66	AR		B	
VHiPM2500+-1	26- 67	BP		B	
VHiPST598DN-1	26- 68	AF		B	
VHiPST598iN-1	26- 69	AF		B	
VHiS1340AF+-1	38- 12	AH		B	
VHiSD4M16L1-1	26- 70	AZ		B	
VHiSD8M16L1-1	26- 71	BB		B	
VHiSR1024-7LL	26- 72	AU		B	
VHiT4955A20-1	26- 73	BF		B	
VHiTD62003AP1	39- 51	AG		B	
VHiTD62503F/-	39- 52	AG		B	
VHiTD62503F-1	26- 74	AF		B	
VHiVHC244SJ-1	39- 53	AG	N	B	
"	40- 19	AG	N	B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VHP1LHEE-002A	26- 75	AC		B	
VHP1LHLE-002A	38- 13	AC		B	
VHPGP1A22LC-1	31- 38	AK		B	
VHPGP1A73A+-1	33- 33	AG		B	
"	34- 68	AG		B	
"	35- 10	AG		B	
VHPGP3A38//--1	31- 36	AH		B	
VHPLT9400E/-1	38- 14	AK		B	
VHV1608C080-1	26- 76	AC		B	
VHV1CPS1.2/-1	26- 77	AF		B	
VRD-HT2EY101J	38- 15	AA		C	
VRD-HT2EY102J	38- 16	AA		C	
VRD-HT2EY163J	39- 54	AA		C	
VRD-HT2EY302J	38- 17	AA		C	
VRD-HT2EY331J	38- 18	AA		C	
VRD-HT2EY471J	38- 19	AA		C	
VRD-HT2EY911J	39- 55	AA		C	
VRS-CZ1JD000J	26- 78	AA		C	
"	39- 56	AA		C	
"	40- 20	AA		C	
VRS-CZ1JD100J	26- 79	AA		C	
VRS-CZ1JD101J	26- 80	AA		C	
"	39- 57	AA		C	
"	40- 21	AA		C	
VRS-CZ1JD102J	26- 81	AA		C	
"	39- 58	AA		C	
"	40- 22	AA		C	
VRS-CZ1JD103F	39- 59	AA		C	
VRS-CZ1JD103J	26- 82	AA		C	
"	39- 60	AA		C	
VRS-CZ1JD122J	39- 61	AA		C	
VRS-CZ1JD151J	39- 62	AA		C	
VRS-CZ1JD183J	26- 83	AA		C	
VRS-CZ1JD203J	39- 63	AA		C	
VRS-CZ1JD220J	26- 84	AA		C	
VRS-CZ1JD221J	26- 85	AA		C	
VRS-CZ1JD222J	26- 86	AA		C	
"	39- 64	AA		C	
"	40- 23	AA		C	
VRS-CZ1JD303F	39- 65	AA		C	
VRS-CZ1JD303J	39- 66	AA	N	C	
VRS-CZ1JD330J	26- 87	AA		C	
VRS-CZ1JD332F	40- 24	AA		C	
VRS-CZ1JD332J	26- 88	AA		C	
VRS-CZ1JD333J	26- 89	AA		C	
VRS-CZ1JD470J	26- 90	AA		C	
VRS-CZ1JD472J	26- 91	AA		C	
VRS-CZ1JD511J	26- 92	AA		C	
VRS-CZ1JD561J	39- 67	AA		C	
VRS-CZ1JD562J	39- 68	AA		C	
VRS-CZ1JD621J	39- 69	AA		C	
VRS-CZ1JD624J	39- 70	AA	N	C	
VRS-CZ1JD681J	39- 71	AA		C	
VRS-CZ1JD750J	26- 93	AA		C	
VRS-CZ1JD752J	39- 72	AA		C	
VRS-CZ1JD823J	26- 94	AA		C	
VRS-CZ1JD911J	39- 73	AA	N	C	
VRS-RE3DA1R0J	39- 74	AB		C	
VS2SB1197//--1	39- 75	AC		B	
VS2SC1740SR-1	38- 20	AB		B	
VS2SK3065+-1	39- 76	AG	N	B	
VSDTA114YK/-1	39- 77	AC		B	
VSDTC114EK/-1	26- 95	AB		B	
VSDTC114YK/-1	26- 96	AC		B	
"	39- 78	AC		B	
VSDTC114YS/-1	38- 21	AB		B	
VSUPA502T//--1	26- 97	AD		B	
"	39- 79	AD		B	
VVLLM065HB1-1	29- 8	CB	N	B	
[X]					
XBBS230P10000	35- 35	AA		C	
XBBSD30P06000	12- 51	AA		C	
"	34- 24	AA		C	
"	36- 2	AA		C	
"	41- 7	AA		C	
XBBSD30P12000	32- 4	AA		C	
XBBSD40P06000	30- 17	AA		C	
"	31- 3	AA		C	
XBBSD40P08000	36- 7	AA		C	
XBBSD40P10000	31- 39	AA		C	
XBBSD40P14000	31- 37	AA		C	

CAUTION FOR BATTERY REPLACEMENT

- (Danish) ADVARSEL !
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.
- (English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.
- (Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.
- (French) ATTENTION
Il y a danger d'explosion s'il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.
- (Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
Instruktion.
- (German) Achtung
Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

- (For USA, CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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SHARP SERVICE MANUAL

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DIGITAL LASER COPIER/PRINTER OPTION PRINT SERVER CARD

AR-NC5J
AR-NC5JG
MODEL AR-NC5JW

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Parts marked with “△” are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

[1] GENERAL

The AR-NC5J is a print server with Falcon 32bit RISC chip, which automatically switches between 10BASE-T/100BASE-TX, conforming to network protocols of TCP/IP (Windows95, Windows98, WindowsMe, WindowsNT4.0, Windows2000, UNIX), IPX/SPX (Netware), AppleTalk (Macintosh), and NetBEUI (Windows95, Windows98, WindowsMe, WindowsNT4.0, Windows2000). The 32bit CPU, together with the automatic switch of 10/100BASE, provides high-speed process. This server allows to share printers in a wide range of network environments from a small-sized network by means of NetBEUI to a large-scale network where two or more network protocols are intermingled.

[2] ENVIRONMENT

1. Items required for connection to a network

- Shield-type, twisted-pair cable (A cable of Category 5 is required for 100BASE-TX.)
- Printer

2. Network computer

- Windows95/98/Me/NT4.0/2000
(One of TCP/IP, NetWare, or NetBEUI must be available.)
- UNIX
- NetWare
- Macintosh (AppleTalk must be available.)

[3] MAJOR FUNCTIONS

1. Functions

A. Automatic IP address setup by DHCP, BOOTP, RARP

(1) DHCP/BOOTP

The AR-NC5J, equipped with the DHCP/BOOTP protocols, allows to make setups related to TCP/IP in a network where a DHCP/BOOTP server is working.

By enabling the DHCP/BOOTP setup of the AR-NC5J, the information related to TCP/IP which is valid in the DHCP/BOOTP server can be set to the AR-NC5J.

- The DHCP protocol supported by the AR-NC5J basically conforms to RFC2131/2132. It conforms to Windows NT DHCP servers.
- To utilize the DHCP function of the AR-NC5J, consult the network manager.

(2) RARP

The AR-NC5J, equipped with the RARP protocol, allows to make setup of IP address in a network where a RARP server is working.

By enabling the RARP setup of the AR-NC5J, the IP address set in the RARP server can be assigned to the AR-NC5J.

B. IPP conformity (TCP/IP)

The AR-NC5J conforms to the Internet printing protocol (IPP Ver.1.0) which allows to print via the Internet. By using the IPP, it allows to print with a remote printer as well as Web access by HTTP.

C. WWW browser

The AR-NC5J, equipped with the HTTP server, can be accessed by a WWW browser to display the printer status or to change the printer setup.

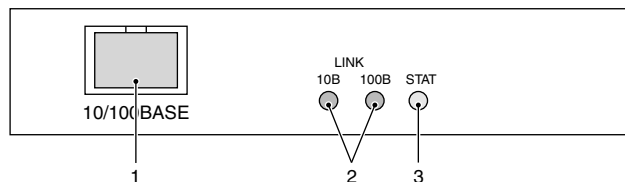
- For operations of HTTP, it is recommendable to use a WWW browser such as Internet Explore4.0 or later or Netscape Navigator4.0 or later. If another browser is used, it must at least conform to HTTP1.0 (RFC1945) or HTML2.0 (RFC1866).
- To use HTTP, the TCP/IP protocol setup of the AR-NC5J must be valid and the IP address of the AR-NC5J must be set.

2. Hardware specifications

CPU	FALCON 32bit RISC chip	
Memory	RAM	4Mbyte
	Flash ROM	1MByte
Network interface	10BASE-T/100BASE-TX	1 port (10/100BASE auto recognition)
Printer interface	Sharp's unique interface	
Other	LED lamp	Status 10Base LINK, 100Base LINK (3 pcs.)

[4] IDENTIFICATION OF EACH SECTION AND FUNCTIONS

1. Connector and LEDs



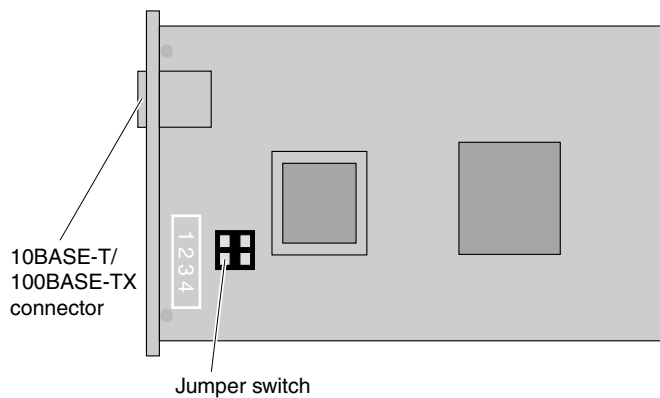
1	Connector for 10BASE-T/100BASE-TX	Connected with a shield-type, twisted-pair cable. (For 100BASE-TX environment, use a cable of Category 5.)
2	10BASE LINK LED (Green)	When a network connection is established in 10BASE-T, this lamp lights up.
	100BASE LINK LED (Green)	When a network connection is established in 100BASE-TX, this lamp lights up.
3	STATUS LED (Orange)	During communication, this lamp flashes.

<Status LED flashing cycle>

Content of operation	Lighting pattern	Cycle
Error detection	 0.2 sec	0.2sec/rapid flashing
Forcible loader mode	 1 sec	1sec/slow flashing Refer to [8]-4-(a).
Factory setup mode	 0.6 sec	Repetition of 0.6sec/ 2times flashing

○ ON
— OFF

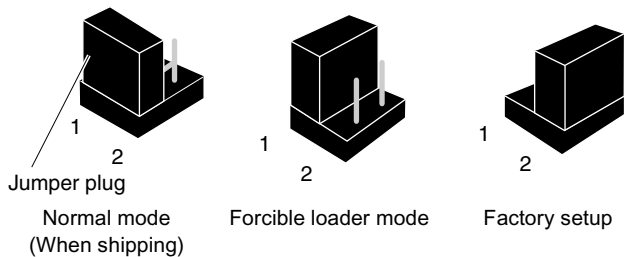
2. Jumper switches



The jumper switch has No. 1 and No. 2 pins, and ON/OFF is switched by the jumper plug.

When getting started, No. 1 pin is ON and the flash memory loader is started. When No. 2 is ON, the factory setting of the environmental variable is performed.

Jumper switch	ON	OFF
1	Forcible loader mode	Normal mode (When shipping)
2	Factory setup mode	Normal mode (When shipping)



NOTE:

- When setting the jumper switch, be sure to turn off the power of the printer.
- For normal use, be sure to set No. 1 and No. 2 to OFF (Normal mode).
- The factory setup can be set by the utility or Telnet as well as the above jumper switch setup operations. Normally the utility or Telnet is used. Setting by the jumper switch is used only when the unit cannot make communication with the AR-NC5J.

[5] INSTALLATION

1. Connection to a network

To connect the AR-NC5J to a network, the following items are required.

- For connection in the 100BASE-TX environment, a hub conforming to 100BASE-TX and a shield-type, twisted-pair cable (Category 5) are required.

Hub	Shield-type, twisted-pair cable

- Check that the printer power is off, and connect the shield-type, twisted-pair cable to the 10/100BASE connector of the AR-NC5J.
- Connect the other end of the cable to the hub.
- Turn on the printer power, and check that the printer operates normally.

2. Parts included

Print server card: 1	Screws (silver) M3 x 8: 2	Spacers (unused): 2
CD-ROM: 1	Operation manual: 1	Installation manual: 1

3. Installation procedure

The AR-NC5J installing procedures in the AR-235/275 series are described.

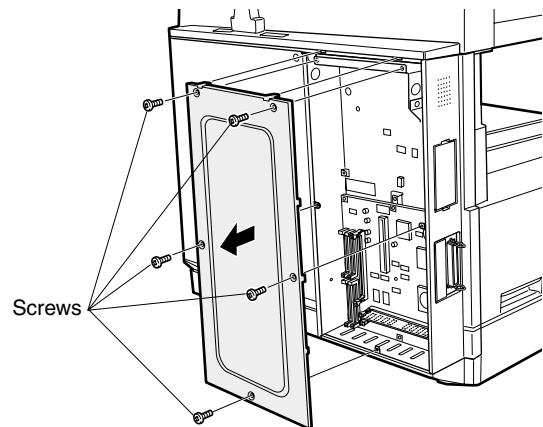
In this case, no spacer is used in the packed items of the AR-NC5J.

For the installing procedures of the AR-NC5J to another printer, refer to the printer's Service Manual or Installation Manual.

Turn off the main switch of the copier and then remove the power plug of the copier from the outlet.

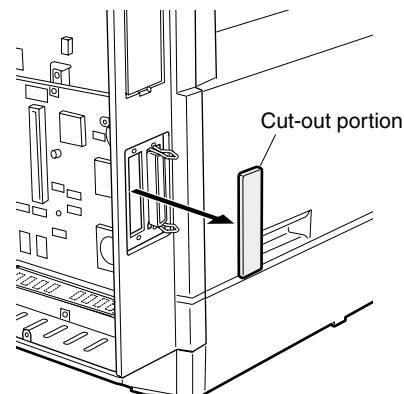
- Remove the shielding plate.

Remove five screws and remove the shielding plate.



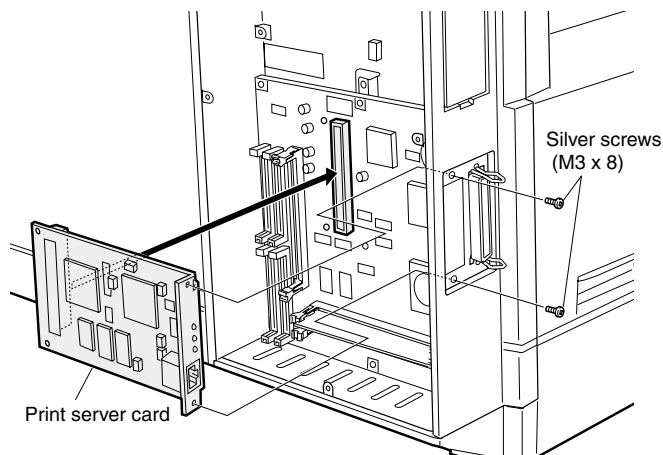
- Cut and remove the cut-out portion from the left rear cabinet.

Cut and remove the cut-out portion from the left rear cabinet using a tool such as nippers. (Be careful about the direction of the tool so that the cut surface is flat.)



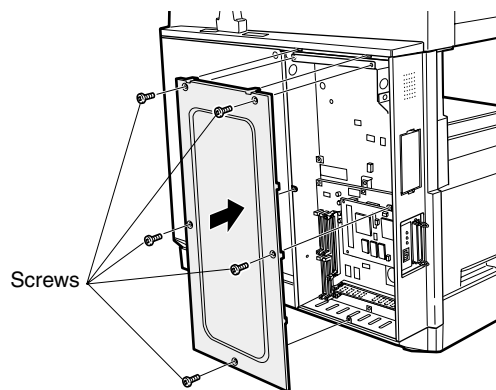
- 3) Attach the print server card.

Align the connector positions, connect the print server card, and then secure the card to the option mounting plate in the main unit using supplied two silver screws (M3 x 8).



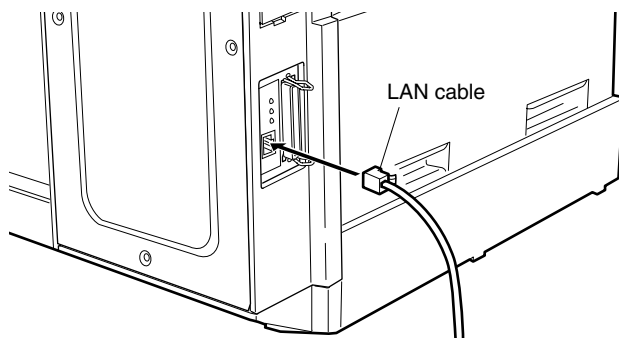
- 4) Reattach the shielding plate.

Reattach the shielding plate using five screws.



- 5) Connect the cable to the control PWB.

Connect a LAN cable to the connector of the print server card.



Insert the power plug of the copier to the outlet and turn on the main switch. Then, carry out the following procedure.

- 6) Check for the print server card.

Use the keys on the operation panel to print a configuration page. Check that the network interface card has been installed.

- 7) Check for printing.

Perform setup of the environmental variables. (refer to [6]-2)

(For installation of printer drivers on a computer and network settings (IP address input), see the supplied operation manual.)

Execute printing to check to see if printing can be executed properly.

[6] AR-NC5J STATUS CHECK

1. Printing the status page

The AR-NC5J status is checked by printing the status page.

A. Example of status page print

There are roughly two ways of printing the status page.

- Printing the status page is performed when starting the AR-NC5J.
→ Refer to the manual on the AR-NC5J setup.
 - Perform printing of the status page from the operation panel of the printer.
→ Some printers may not support it. Refer to the Operation Manual of the printer.
- * The same information as the status page print-out can be obtained from the utility Web page.

<Example of the status page>

Sharp AR-NC5J Version 1.0.0

Copyright(C) 2000 SHARP CORPORATION

Copyright(C) 2000 Japan Computer Industry Inc.

*** Network status report ***

[GENERAL]

```
model name      Sharp AR-NC5J
version         1.0.0
printer name
link status     100BASE-TX
duplex mode     HALF
Hardware addr   00:80:92:00:13:67
Status print    YES
```

[TCP/IP]

```
status          enabled
IP address      192.168.40.148
subnet mask     255.255.255.0
gateway         192.168.40.254
```

[NetWare]

```
status          enabled
packet type     802.2
network number  00000001
print mode      PSERVER
connected FS 0  EXACTION(Bindary)
NDS Tree        MH_____
NDS context
```

[AppleTalk]

```
status          enabled
zone name       TEST01
type name       LaserWriter
object name     SC001367
```

[NetBEUI]

```
status          enabled
computer name   SC001367
workgroup name  Sharp-Printer
master browser  SC001367
```

2. AR-NC5J setup items

After completion of installation, perform setup of the environmental variables. Explanations on the variables are given below.

A. General

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Change root Password	Change Admin password	Admin Password	Sharp	The administrator password of the AR-NC5J is set with ASCII character codes. This password is used for identification when changing setup by Telnet, a Web page, or a setup utility. Remark: Indicated as "*" for security.
Print status after Boot-up	Print status after Boot-up	Print status after Boot-up	NO	When booting the AR-NC5J, select whether to print the status page or not.

B. TCP/IP and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
TCP/IP Protocol	TCP/IP Protocol	TCP/IP protocol is used.	ENABLE	Used to enable/disable TCP/IP protocol. This setup will affect the operations of LPR, FTP, TELNET, SNMP, HTTP, and the setup utility (for TCP/IP).
DHCP/BOOTP	DHCP/BOOTP	DHCP/BOOTP is used.	ENABLE	Used to enable/disable the operation of DHCP/BOOTP protocol. The DHCP/BOOTP protocol acquires an IP address from the DHCP server or the BOOTP server when booting. To set an IP address of the AR-NC5J, a DHCP server or a BOOTP server which has been properly set should be operating in the sub network. The AR-NC5J automatically recognizes DHCP and BOOTP, and employs as its address whichever replies to it first.
RARP	RARP	RARP is used.	ENABLE	Use to disable/enable the RARP protocol operation. The RARP protocol acquires an IP address from the RARP server. To set an IP address of the AR-NC5J by RARP, the RARP server which has been properly set should be operating in the sub network.
IP Address	IP Address	IP Address	0.0.0.0	Used to set an IP address of the AR-NC5J. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx."
Subnet Mask	Subnet Mask	Subnet Mask	0.0.0.0	Used to set the subnet mask of the AR-NC5J. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx." When "0.0.0.0" is set, this item is disabled, and the subnet mask corresponding to the IP address is automatically used.
Default Gateway	Default Gateway	Default Gateway	0.0.0.0	Used to set an IP address of the gateway. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx." The gateway must exist in the same sub network as the AR-NC5J. When "0.0.0.0" is set, this item is disabled.
Use FTP/LPD Banner	Use FTP/LPD Banner	Use FTP/LPD Banner	NO	Used to set whether to output the banner page when printing with LPR or FTP.

C. NetWare and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Netware Protocol	Netware Protocol	Use Netware Protocol.	ENABLE	Used to disable/enable the NetWare protocol operation. This setup will affect the operations of the print server, the remote printer, and the setup utility (for IPX/SPX).
Frame Type	Frame Type	Frame Type	802.2	Used to set the default frame type which is used by the AR-NC5J. If the set frame type does not work, another frame type is automatically selected.
Operation Mode	Operation Mode	Operation Mode	PSERVER	Used to set the priority operation mode (print server/remote printer) of the AR-NC5J. If the set mode does not work, another mode is automatically selected and tried.
Printer Name	Printer Name	Printer Name	"SCxxxxx-prn1" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the printer name which is registered in the print server information in the NetWare server. This setup must be identical to the setup of the printer name registered in the NetWare server.
Print Server Name	Print Server Name	Print Server Name	"SCxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the print server name when the AR-NC5J is booted in the print server mode. Since this setup is used as an identification element in a network with the NetWare protocol, it must be different from the other NetWare product names. It is used as the login name to log in the NetWare server.

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Login Password	Login Password	Login Password	No (No password)	Used to set the password authenticated when the AR-NC5J logs in the file server as a print server. The password can be set in max. 31 characters. However, it is not recommendable to use Chinese characters and Katakana character in a password. When a password is set for the AR-NC5J, the same password must be set to the corresponding file server. (Setup of a password on the file server is made from "Print server information.") When connecting to two or more file servers, the same password must be set to all of them. *Note: The AR-NC5J uses a null character array for the default password. That is, even though a password is set to the AR-NC5J and no password is set to the print server information (a null character array is set), connection and printing are allowed. This, however, is an exceptional process. In the normal process, the password set to the AR-NC5J must be identical to that for the print server information.
Job Polling (sec)	Job Polling interval (sec)	Job Polling interval	4	Used to specify the time interval (sec) between job inquiries from the AR-NC5J to the filer server. Normally there is no need to change the default setup, 4sec.
Bindary Mode	Bindary Mode	Bindary setup	ENABLE	Used to disable/enable the bindary mode operation. When disabled, only the NDS mode operation is valid. This is set to DISABLE only when only the NDS mode is used.
FSERVER Name 1 – 8	File server name 1 – 8	Filer server name to be connected	""	Used to set the priority file server name with max. 31 characters. When operating in the print server mode, the file server specified in this setup is logged in. If this setup is empty, the AR-NC5J automatically retrieves a file server to log in.
NDS Tree	NDS Tree name	NDS Tree name	""	Used to set the NDS tree to be connected. Since it is automatically acquired, there is no need to set in normal cases. If there are two or more trees in a network, it must be set.
NDS Context	NDS Context	NDS Context	""	Used to set the NDS context connected in the print server mode. In this item, the context which formed the print server on the file server is set.
PSERVER Name 1 – 8	Print Server name 1 – 8	Print Server name to be connected	""	Used to set the print server name to be connected in priority. When operating in the remote printer mode, connection is made to the print server set in this setup. If this setup is empty, the AR-NC5J automatically retrieves a print server to connect.
Job Timeout (sec)	Job Timeout (sec)	Job Timeout	10	Used to set the timeout for the AR-NC5J to judge the completion of a job when operating in the remote printer mode. Usually the default value is used.

D. AppleTalk and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
AppleTalk Protocol	AppleTalk Protocol	Use AppleTalk Protocol.	ENABLE	Used to disable/enable the AppleTalk protocol operation.
Zone Name	Zone Name	Zone Name	""	Used to set the zone name which the AR-NC5J belongs to. If this setup is "", The AR-NC5J belongs to the default zone set in the AppleTalk router in the network.
Printer Name	Printer Name	Printer Name	"SCxxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the AppleTalk printer name. The set printer name is visible from the selector. The special codes (=:@*) of the AppleTalk protocol cannot be used in this character array.

E. NetBEUI and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
NetBEUI Protocol	NetBEUI Protocol	Use NetBEUI Protocol.	ENABLE	Used to disable/enable the NetBEUI protocol operation.
Computer Name	Computer Name	Computer name	"SCxxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the computer name. The set name is displayed in Window's Explorer. The name must be different from the other computer names.
Work Group	Work Group	Work Group	"Sharp-Printer"	Used to set the work group which the AR-NC5J belongs to. Use the default work group name or an existing work group name. A new work group name which does not exist in the network cannot be displayed as a work group.
Comment	Comment	Comment	"Sharp AR-NC5J"	Used to set the comment on the AR-NC5J. The set contents are displayed as the comment on the AR-NC5J by Window's Explorer.

[7] TROUBLESHOOTING

1. Obstacles to introduction

A. Test print is not outputted.

Check that the printer is ready for printing. (Online/Offline, etc.)

Check that the data reception lamp of the printer is on. If it is on, turn it off and press the paper exit button to discharge paper.

2. Obstacles in Windows environments (TCP/IP)

A. NICManager retrieval cannot find out the AR-NC5J.

Check that the network cable is properly connected.

In the NICManager menu bar "Option", select "Search by TCP/IP" and perform retrieval.

B. Printing cannot be made.

Check that the network cable is properly connected.

When the TCP/IP protocol is used, check that there is a reply of ping for the IP address assigned to the AR-NC5J.

Check that the printer JOB lamp is on. If it is on, turn it off and press the paper exit button to discharge paper.

3. Obstacles in Windows environments (NetBEUI)

A. Work Group of "Sharp Printer" is not found in the entire network.

Check that the network group is properly connected.

Check the network setup of Windows.

It may take several minutes to find the work group in the network.

4. Obstacles in NetWare environments

A. NICManager retrieval cannot find out the AR-NC5J.

Check that the network cable is properly connected.

In the NICManager menu bar "Option", select "Search by IPX/SPX" and perform retrieval.

B. Cannot connect to the NetWare server in the remote printer mode.

Check that the packet type and the NetWare operation mode are proper.

The AR-NC5J switches automatically, however it may take some time depending on the use environment.

Check that the print server which the AR-NC5J is registered in is normally working in the NetWare server.

Check that the print server name is properly set. If the print server name registered in the AR-NC5J is specified, check that the print server name is identical to what is working on the file server.

Do not use a same port name in different products.

C. Cannot connect to the NetWare server in the print server mode.

Check that the packet type and the NetWare operation mode are proper.

The AR-NC5J switches automatically, however it may take some time depending on the use environment.

When a file server is specified to the AR-NC5J, check that the name of the file server which is used is identical to the set name.

Check that the printer port name is properly set. Check that the printer port name set to the AR-NC5J is identical to the printer port name set to the NetWare server. If there are two or more units of the AR-NC5J, do not use the same name for different AR-NC5J, and do not use the same port name for different ports.

Check that the NetWare login password is correct.

Check that the machine name is identical to the print server name.

D. Printing cannot be performed.

Check that the network cable is properly connected.

Check that the printer job lamp is on. If it is on, turn it off and press the paper exit button to discharge.

5. Obstacles in Macintosh environments

A. Not recognized with the selector.

Check that the network cable is properly connected.

When there is a zone in the network, check that the selector connects to the proper zone (which the printer is connected to) and check that the zone name is the same as what is set by a utility, etc.

Check that the printer conforming to the printer is selected.

Check that the AppleTalk indicated at the right lower side of the selector is set to "Use."

Check that "AppleTalk (*1) (Network)(*2) setup is proper to the use environment.

*1: In the case of AppleTalk

Check that "Ethernet" is selected. When an AppleTalk router is used to connect the AR-NC5J with LocalTalk, check that "Printer port" or "MODEM port" is selected.

*2: In the case of Network

Check that "Ethernet" is selected. When an AppleTalk router is used to connect the AR-NC5J with LocalTalk, check that "LocalTalk" is selected.

Print the setup contents and check that the AppleTalk protocol is not disabled. Setup can be made by using Telnet, Windows utility, or setup utility for Macintosh.

Print the setup content and check that the printer name is not empty.

B. When printing, "Insufficient memory" is displayed and printing cannot be made./When printing, only Chinese characters are printed or blank paper is outputted.

It may be caused by insufficient memory capacity for the application. Click the icon of the using application, select "See information" in the file menu, and increase the use memory size of the application.

Terminate the other applications which are acting.

Increase the starting disk capacity.

[8] FLASH ROM VERSION UP PROCEDURE

1. Operating environment

The version up tool requires the operating environment of Windows95/98/Me/NT/2000.

- In the Windows NT/2000 environment, communication is performed by use of the IPX/SPX protocol. So the IPX/SPX protocol must be installed.
- In the Windows 95/98/Me environment, both the packet driver and the IPX/SPX protocol are retrieved for use of communication, and an available communication means is used to perform uploading. (If both are available, the IPX/SPX protocol has priority.)

If the IPX/SPX protocol is available and there is a NetWare server in the environment, a network number may be obtained from the NetWare server to allow communication (retrieval and upload) with a print server card which is outside of the router. In the other environments, communication with a device outside the router cannot be made.

2. Making of execution environment

The version up tool is provided in a form of self-extracting compression files. You may extract necessary files in your desired folder without any special installing program.

For multi language use, the self-extracting file is provided in each language. The tool is not provided with a UI for selection of language.

In addition, one PC cannot operate two or more displays simultaneously.

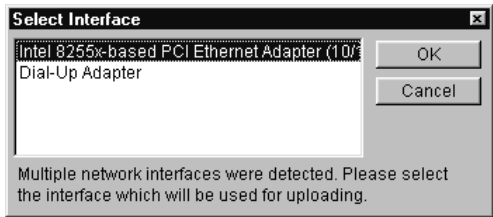
3. Procedures

A. Establishment of communication means

(In the case of Windows 95/98/Me)

When the tool is executed, if two or more network adapters are installed, the network adapter selection menu is displayed. Select the Ethernet network adapter in this menu and press the OK key, retrieval will be executed. If, however, initialization of the packet driver is failed with the selected network adapter, the machine returns to the network adapter selection menu. Pressing the CANCEL key terminates the tool operation.

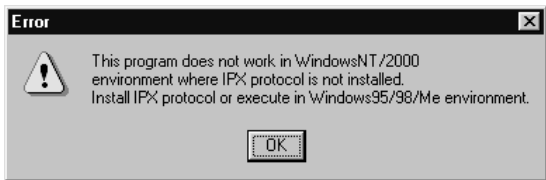
When only one network adapter is installed, this selection menu is not displayed.



Network adapter selection menu

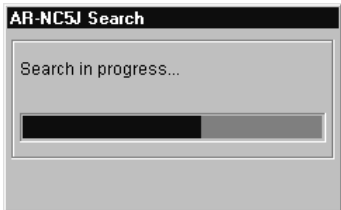
(In the case of Windows NT/2000)

When this tool is executed, installation of the IPX/SPX protocol is checked. If the IPX/SPX protocol is not installed, the error message is displayed and the tool is terminated. If installed, retrieval is performed.



IPX not-installed error message

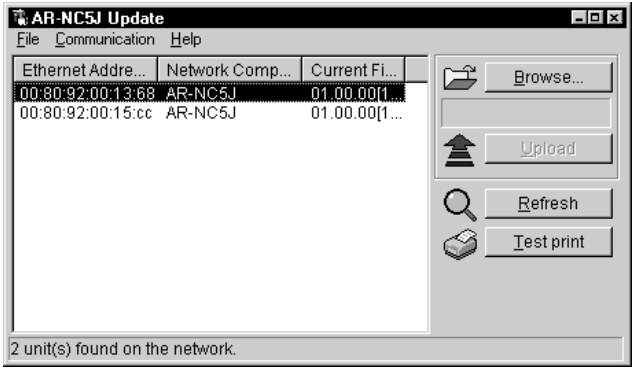
When the communication means is established, as described above, the tool retrieves for the AR-NC5J installed in the network. During retrieval, the process status bar is displayed.



Retrieval process status display

B. Main menu

When retrieval is completed, the main menu of the tool is displayed, and the list of retrieval results is displayed.



Main menu

Clicking the heading of the list changes the sort conditions.

When a BIN file name is selected, it is displayed in the column below the Browse button.

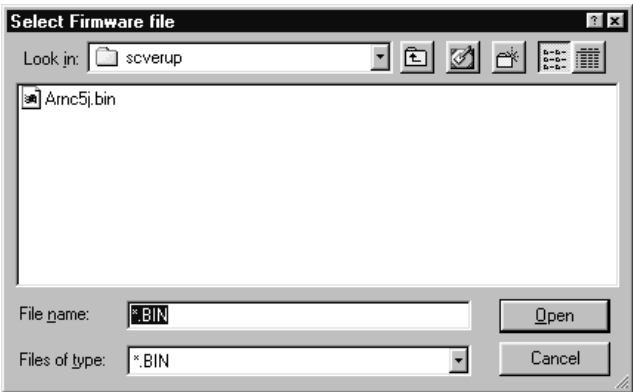
The menu is composed as shown in the table below. The names in [] show buttons of the same function on the main menu.

Group name	Sub menu name	Function
File	Open [Browse]	Displays the file selection dialog to select and change a BIN file to write into.
	Refresh [Refresh]	Retrieves a printer on the network and revises the list.
	Exit	Terminates the program.
Communication	Upload [Upload]	Starts writing of the Bin file to the selected printer.
	Test print [Test print]	Sends the test print command to the selected printer to perform test printing.
	Options	Opens the option setup dialog.
Help	About	Opens the version information display.

C. File selection dialog

In the main menu, select FILE a OPEN or press the Browse button, and the file selection dialog will be opened. Select a BIN file to write into the AR-NC5J.

If a BIN file which is not for the AR-NC5J is selected, an error occurs.



File selection dialog

D. Firmware upload

Select a desired printer from the list and a Bin file. Under this condition, select COMMUNICATION a UPLOAD or press the UPLOAD button, and the firmware will be uploaded. There are following three patterns of writing procedures:

1) Single selection

When only one printer is selected from the list on the main menu:

First the upload start confirmation display is shown. Selecting YES in this menu deletes the firmware and starts uploading. During uploading, the process indication bar is displayed on the firmware upload menu.

After completion of uploading, the firmware upload menu is closed and the control returns to the main menu.

2) Plural selection (without confirmation)

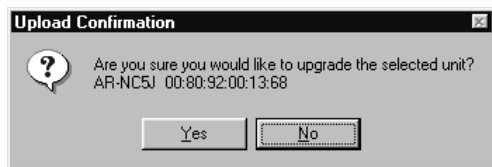
When two or more printers are selected from the list on the main menu, and a check mark is not put to "When uploading to multiple units, display a confirmation prompt for each unit."

In this case, the upload start confirmation menu is displayed only once when starting the first writing. Selecting YES in this menu starts writing the firmware to the selected printers continuously. The operations during and after writing are the same as "Single selection."

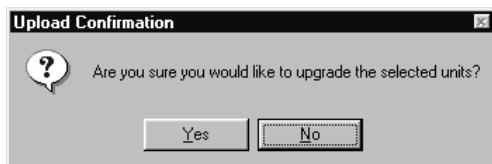
3) Plural selection (with confirmation)

When two or more printers are selected from the list on the main menu, and a check mark is put to "When uploading to multiple units, display a confirmation prompt for each unit."

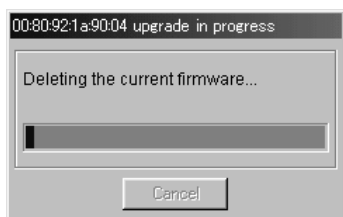
In this case, the upload start confirmation menu is displayed and delete/uploading of the firmware is made for each of the selected printers. (This series of operations is repeated for each printer.) If NO is selected in the confirmation menu, uploading is not performed and the control goes to the confirmation menu of the next printer. The operations during and after writing are the same as "Single selection."



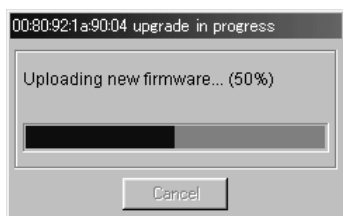
Upload start confirmation menu
(Single selection/Plural selection (with confirmation))



Upload start confirmation menu
(Plural selection (without confirmation))



Firmware delete menu



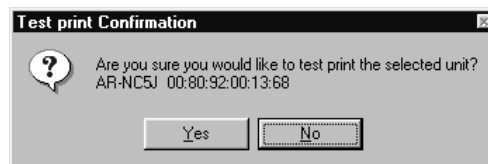
Firmware upload menu

E. Test print

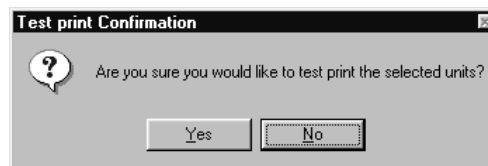
After selecting a desired printer from the list, select COMMUNICATION a TEST PRINT on the menu or press the TEST PRINT button, and the test print of the selected printer will be performed. This function is used for troubleshooting.

Similarly to the firmware uploading, there are three patterns: Single selection, Plural selection (without confirmation), and Plural selection (with confirmation).

If the test print packet that is sending fails, an error message is displayed. (Refer to "5. Error message list." In the case of normal completion, no message is displayed.



Test print confirmation menu
(Signal selection/Plural selection (with confirmation))



Test print confirmation menu
(Plural selection (without confirmation))

<Example of TEST PRINT>

Sharp AR-NC5J Version 01.00.01
Copyright(C) 2001 SHARP CORPORATION
Copyright(C) 2001 Japan Computer Industry Inc.

```
*** Diagnostic report ***
ROM Check : Ok  stat: B744 FFFF 0000 0000
RAM Check  : Ok  stat: 0000 0000 0000 0000
NIC Check  : Ok  addr: 00:80:92:00:15:0F  100BASE-TX
EEPROM Check : Ok  stat: 7816 7816 0000 0000

JUMP-1 : OFF(ON:Test use only)
JUMP-2 : OFF(ON:Initialize configuration)
```

4. Notes during/after uploading

During and after uploading, take care of the following notes:

- (a) During uploading, the printer power should not be turned off and the network cable should not be disconnected. If they should, uploading will not performed normally and the firmware will be broken.

If the firmware should be broken due to an accident during uploading, retrieval by the version up tool may not be responded. In such a case, reboot the printer with the jumper switch No. 1 at ON, and the network card will be booted in the forcible loader mode to make responding to retrieval.

This operation is performed similarly to both cases when the IPX/SPX protocol is used and when the packet driver is used. There are no limitations.

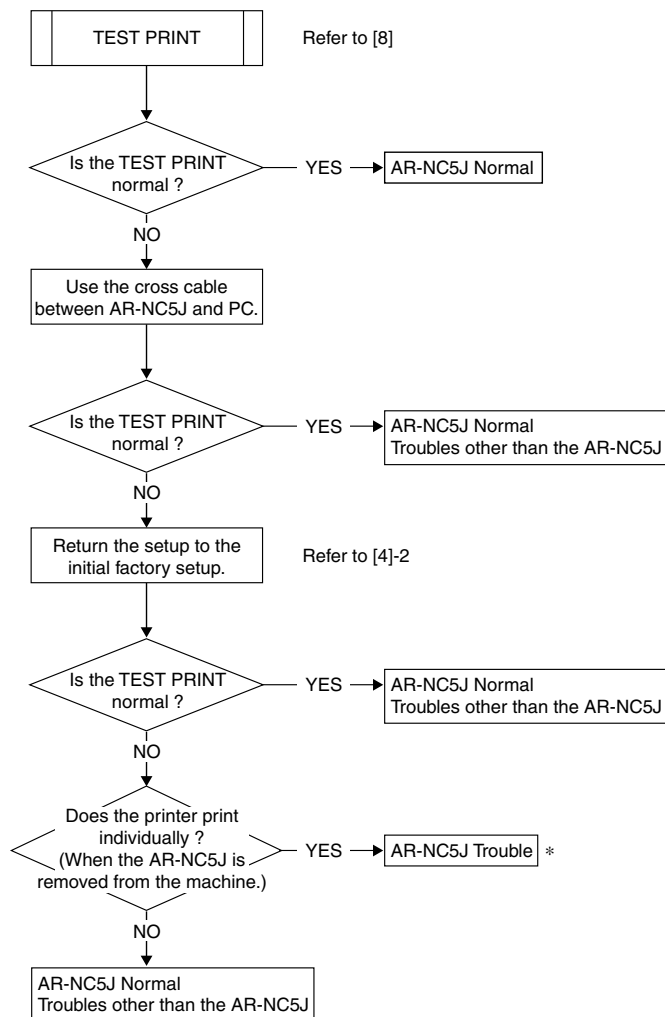
- (b) When the composition of the setup information differs between different versions before and after uploading, the content of setup may be broken after completion of uploading. (This information will be given with version-up bin file.) In such a case, the setup should be returned to the initial factory setup. Then use the setup tool and a Web browser to make setup again.

5. Error message list

The table below shows the error messages list of the version up tool.

Error message	Occurring conditions
Invalid firmware file. Select a correct file.	The Bin file of the selected firmware was improper. (Example: A BIN file of other unit than the AR-NC5J was selected.)
Can't operate more than 32 units at the same time.	Printers of over 32 units were selected and Uploading or test print was performed
Upload failed.	A communication error occurred during uploading.
Failed starting communication with XX:XX:XX:XX:XX:XX.	Immediately after completion of firmware uploading, the printer could not enter the loader mode.
No response after sending the commands to XX:XX:XX:XX:XX:XX.	After sending the test print command, there was no response from the AR-NC5J.
Timeout time is not available.	A value other than 1 - 99 or a character is entered for time out setup.
Failed to initialize packet driver.	Initialization of the packet driver failed when a single network adapter was installed under Win95/98/Me environment.
Failed to initialize packet driver. Do you want to use other network adapter?	Initialization of the packet driver failed in an adapter after selecting the adapter when plural network adapters were installed under Win95/98/Me environment.
This program does not work in WindowsNT/2000 environment where IPX protocol is not installed. Install IPX protocol or execute in Windows95/98/Me environment.	The version up tool was executed under Windows NT/2000 without installing the IPX/SPX protocol.

6. Check for defectiveness of the AR-NC5J



* If there is another printer than those which conform to the AR-NC5J, install the AR-NC5J to be checked, and perform the same procedures to check.

CAUTION FOR BATTERY REPLACEMENT

(Danish)

ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.

Udskiftning må kun ske med batteri

af samme fabrikat og type.

Levér det brugte batteri tilbage til leverandoren.

(English)

Caution !

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type

recommended by the manufacturer.

“BATTERY DISPOSAL”

CONTAINS MANGANESE DIOXIDE LITHIUM BATTERY

MUST BE DISPOSED OF PROPERLY.

REMOVE THE BATTERY FROM THE PRODUCT AND

CONTACT FEDERAL OR STATE ENVIRONMENTAL

AGENCIES FOR INFORMATION ON RECYCLING

AND DISPOSAL OPTIONS.

“BATTERY DISPOSAL”

CONTAINS LITHIUM-ION BATTERY.

MUST BE DISPOSED OF PROPERLY.

REMOVE THE BATTERY FROM THE PRODUCT AND

CONTACT FEDERAL OR STATE ENVIRONMENTAL

AGENCIES FOR INFORMATION ON RECYCLING

AND DISPOSAL OPTIONS.

(Finnish)

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.

Vaihda paristo ainoastaan laitevalmistajan suosittelemaan

tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden

mukaisesti.

(French)

ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du

même type ou d'un type équivalent recommandé par

le constructeur.

Mettre au rebut les batteries usagées conformément aux

instructions du fabricant.

(Swedish)

VARNING

Explosionsfara vid felaktigt batteribyte.

Använd samma batterityp eller en ekvivalent

typ som rekommenderas av apparattillverkaren.

Kassera använt batteri enligt fabrikantens

instruktion.

(German)

Achtung

Explosionsgefahr bei Verwendung inkorrektter Batterien.

Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder

vom Hersteller empfohlene Batterien verwendet werden.

Entsorgung der gebrauchten Batterien nur nach den vom

Hersteller angegebenen Anweisungen.



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